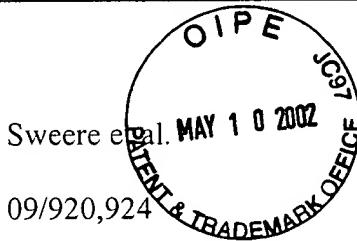


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:



) Art Unit: 3632

) Our Ref. 44374.5.1

Serial No.

09/920,924

Filed: August 2, 2001

For: METHODS AND APPARATUS FOR  
GENERATING FORCE AND TORQUE

To: Assistant Commissioner for Patents  
Washington, D.C. 20231

I hereby certify that this correspondence is being:

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on this 10 day of May 2002

By: Stacy Bickel

FORMAL DRAWINGS

SIR:

Transmitted herewith for filing in the above-identified patent application are sixty-eight (68) sheets of formal drawings to replace the corresponding informal drawings which were submitted with the patent application.

Respectfully submitted,

Dated: 7-MAY-2002

A handwritten signature in black ink that appears to read "Allen W. Groenke".

Allen W. Groenke  
Registration No. 42,608  
Fredrikson & Byron, P.A.  
1100 International Centre  
900 Second Ave. So.  
Minneapolis, MN 55402-3397  
(612) 752-2640

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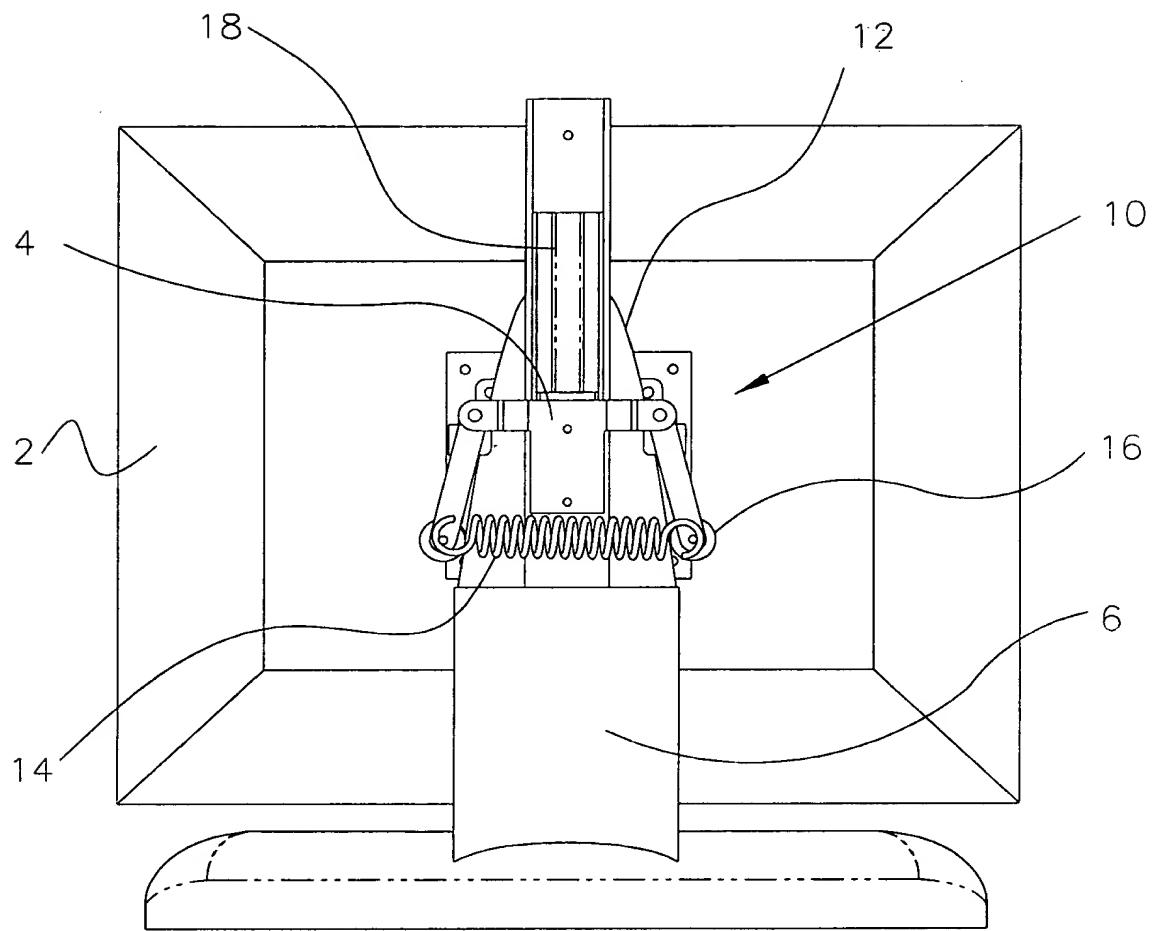


FIG. 1A



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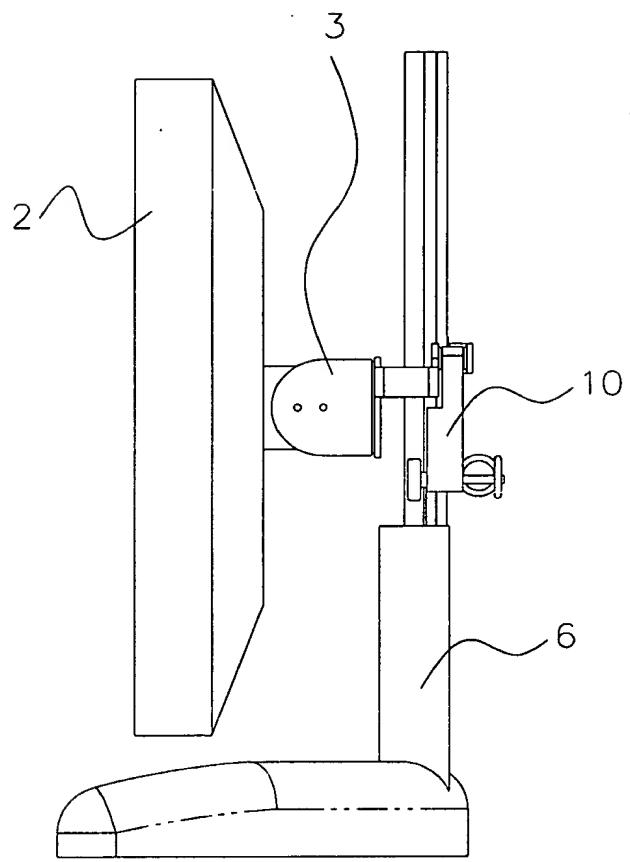


FIG. 1B



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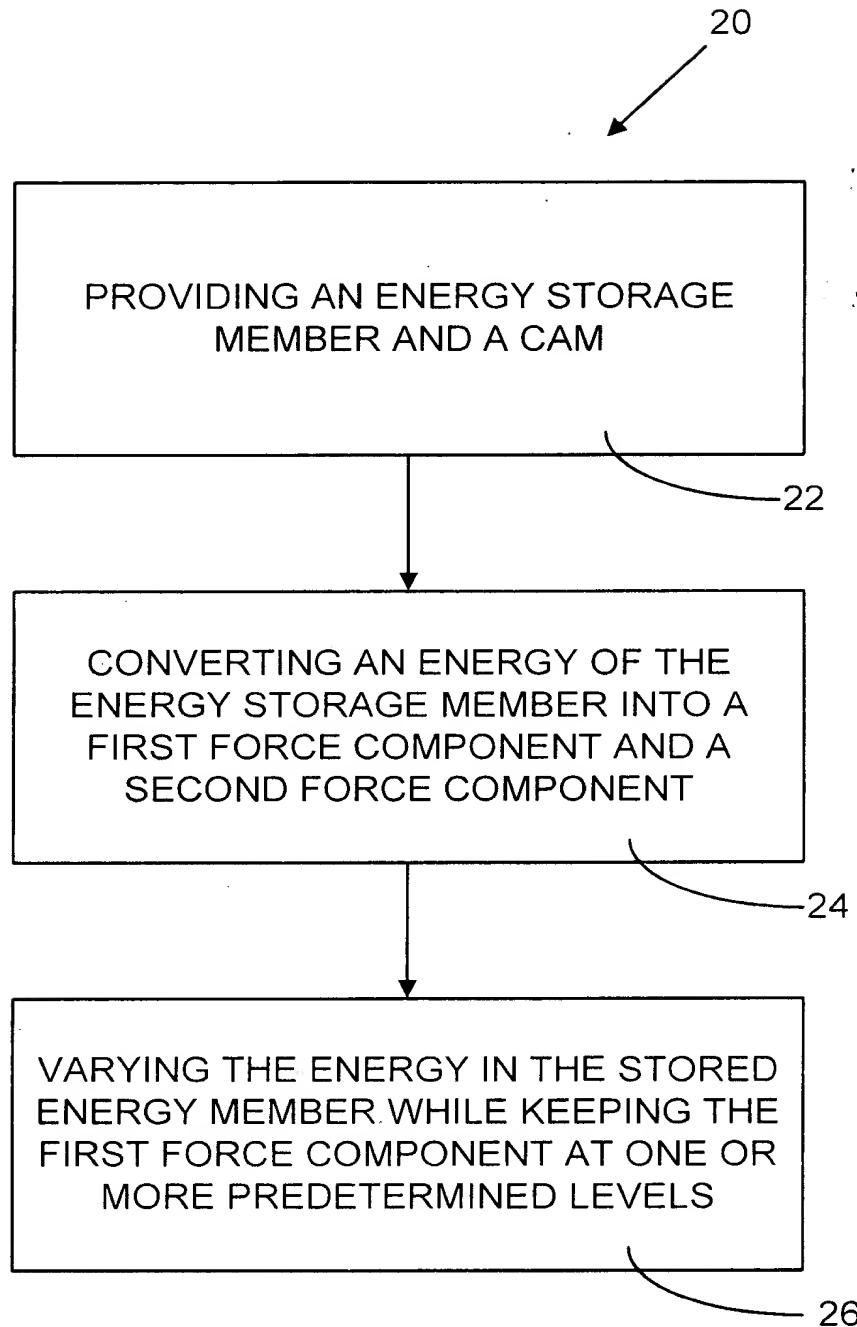


FIG. 2



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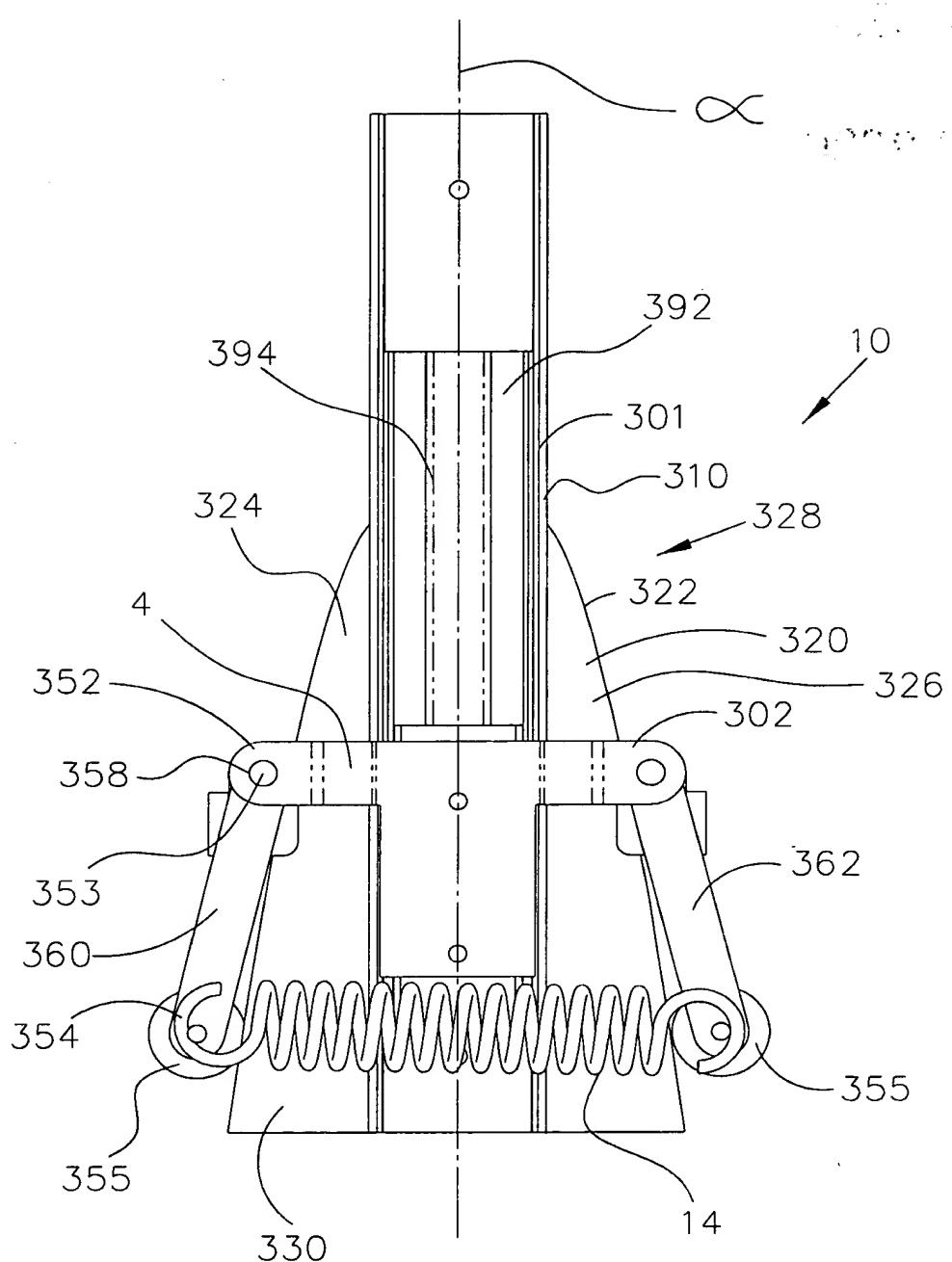


FIG 3A



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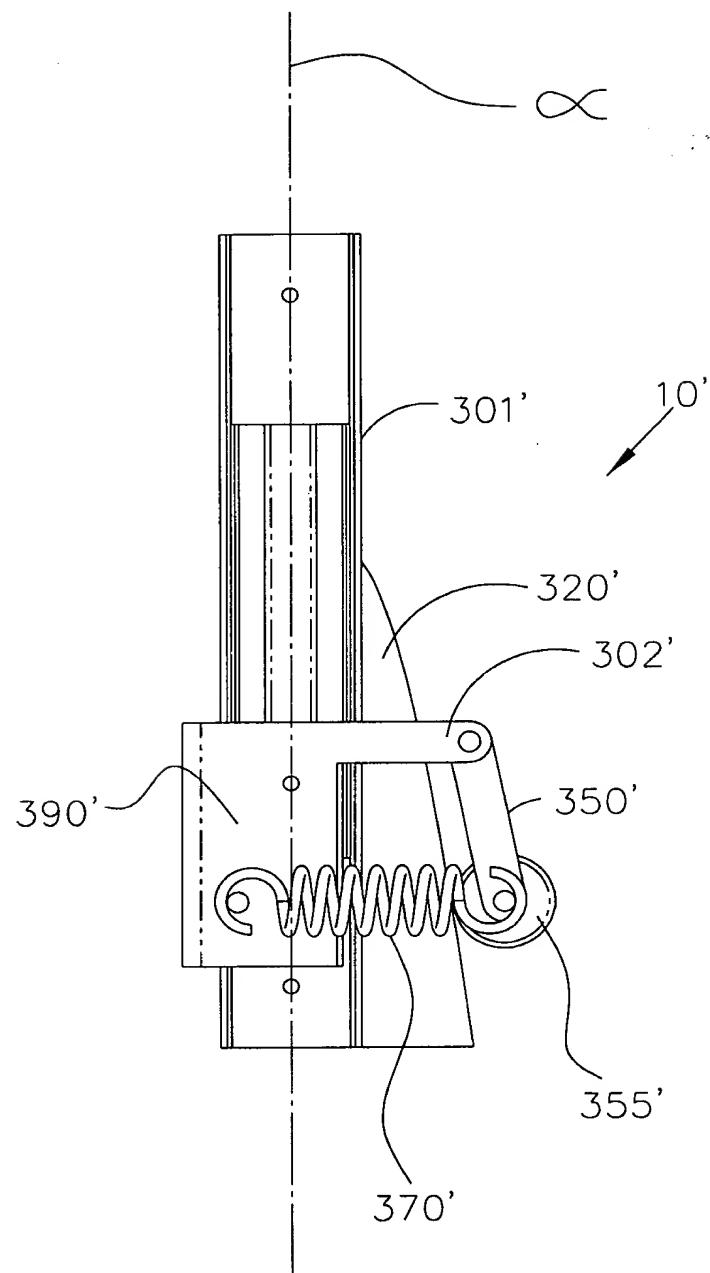


FIG. 3B



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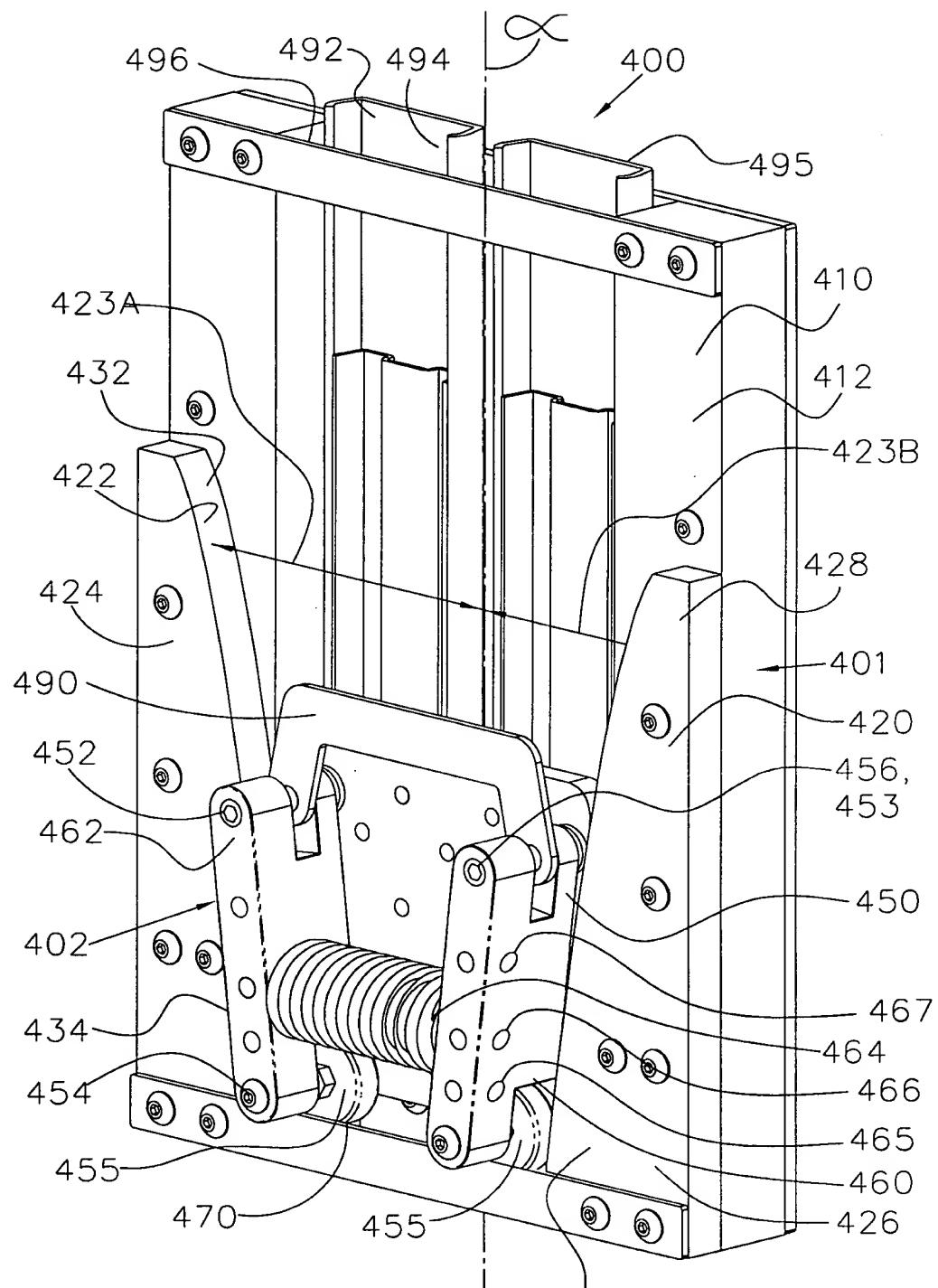


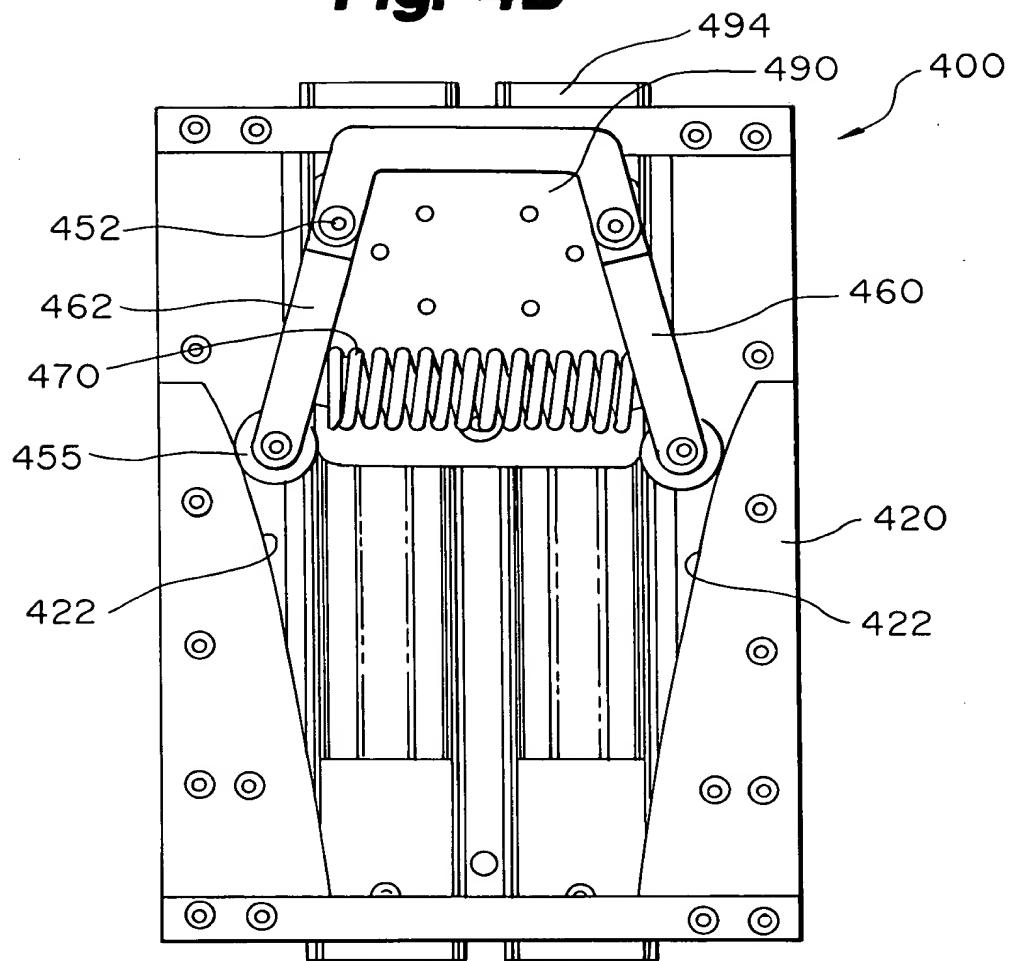
FIG. 4A



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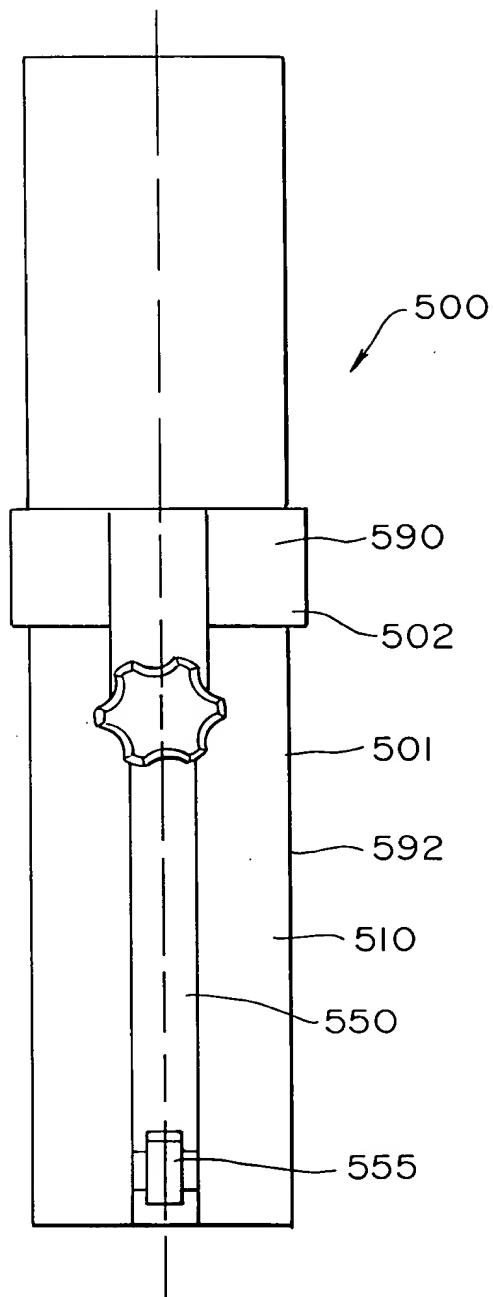
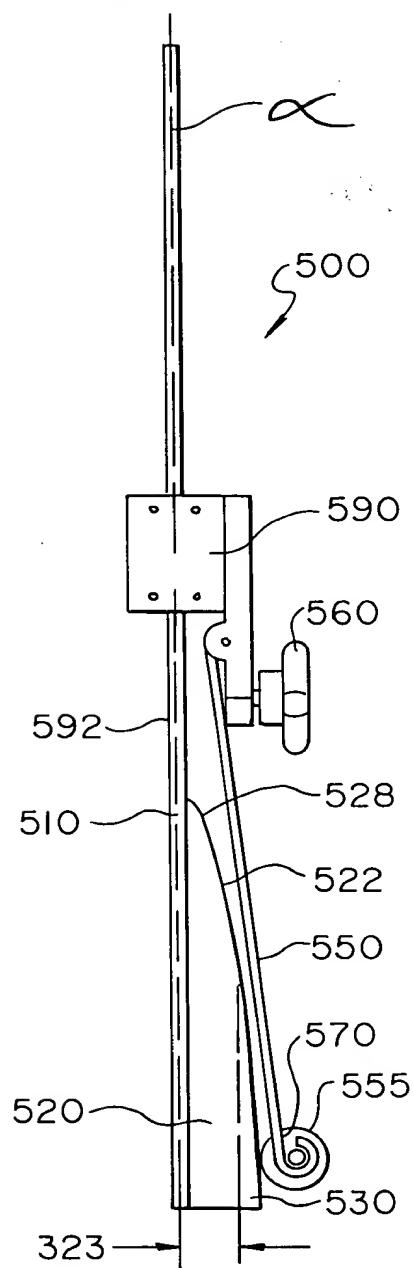
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**Fig. 4B**



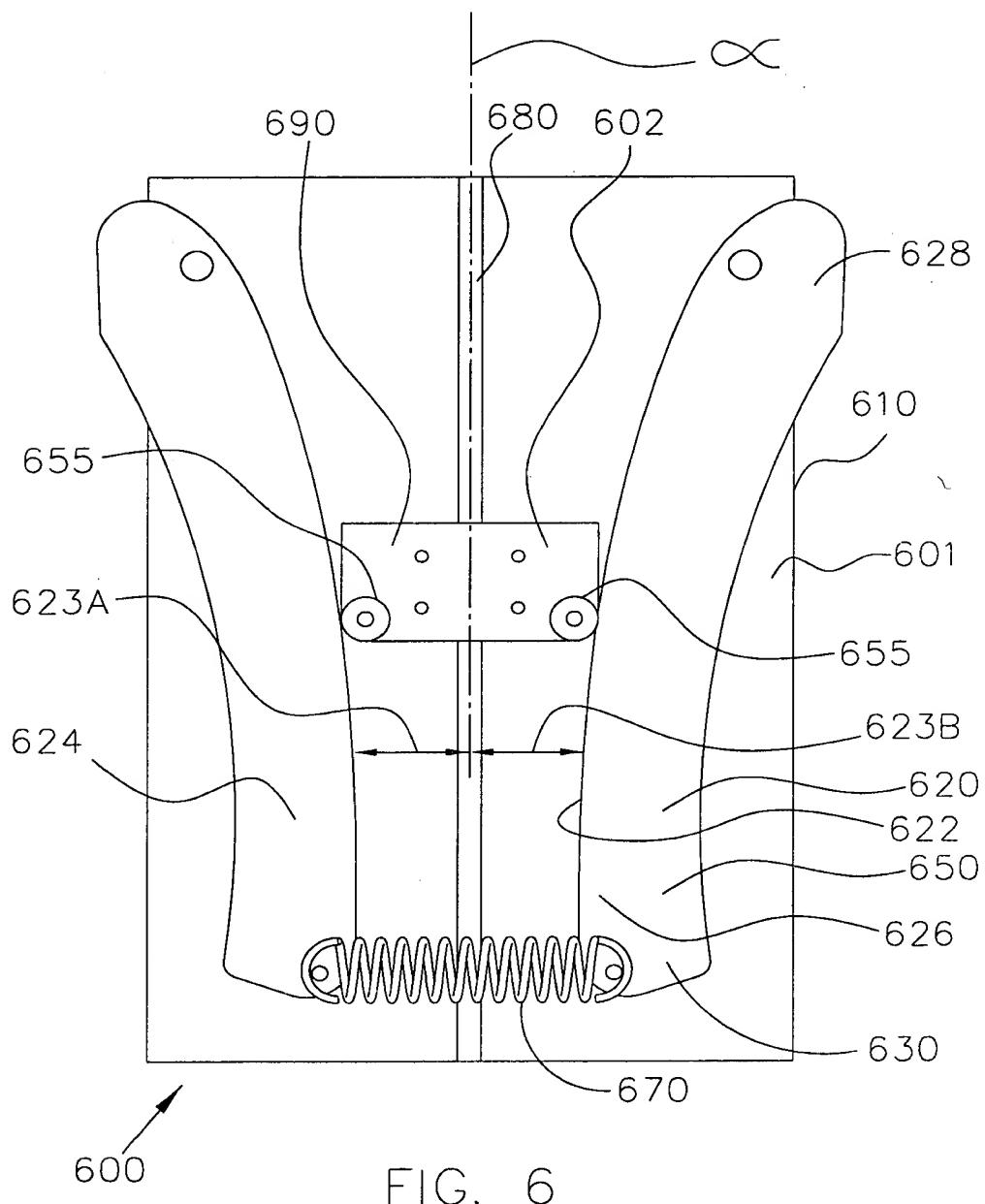
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**Fig. 5A****Fig. 5B**



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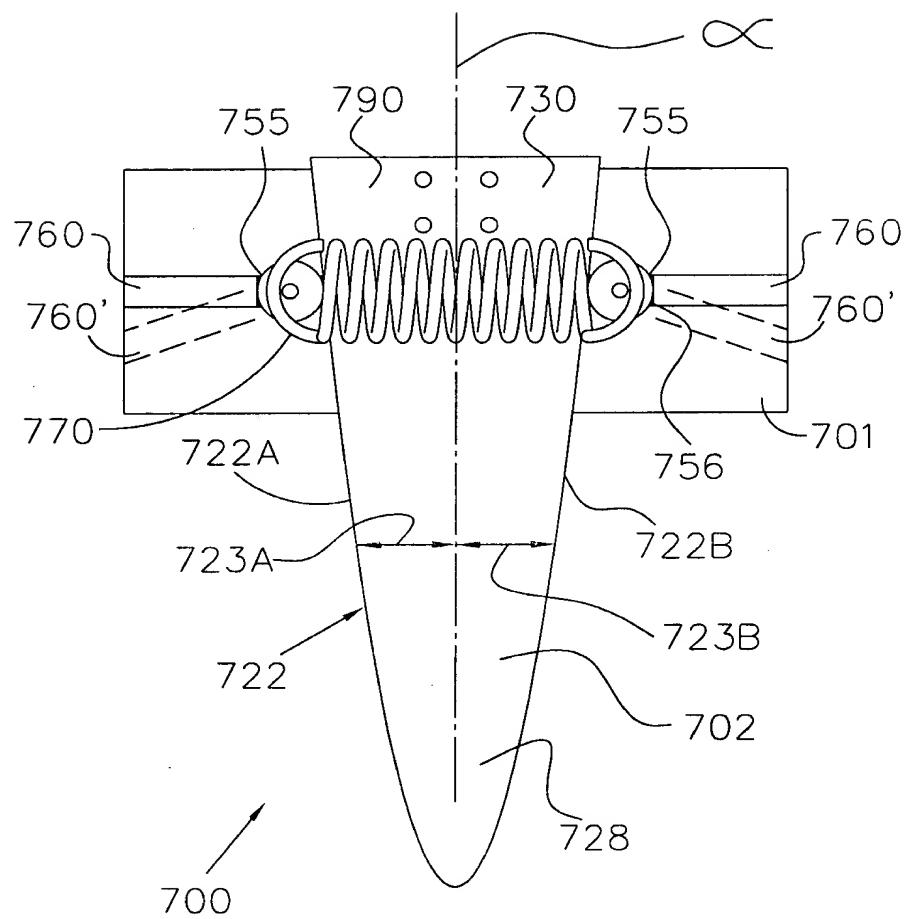


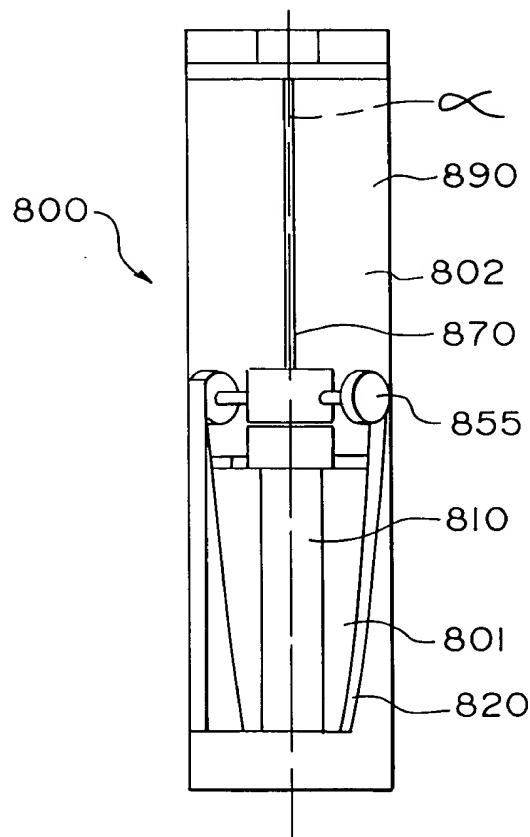
FIG. 7



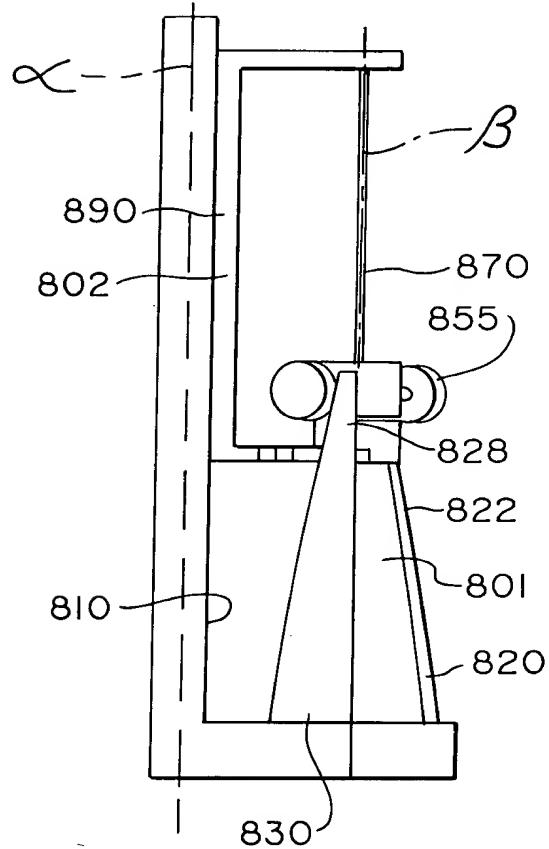
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**Fig. 8A**



**Fig. 8B**





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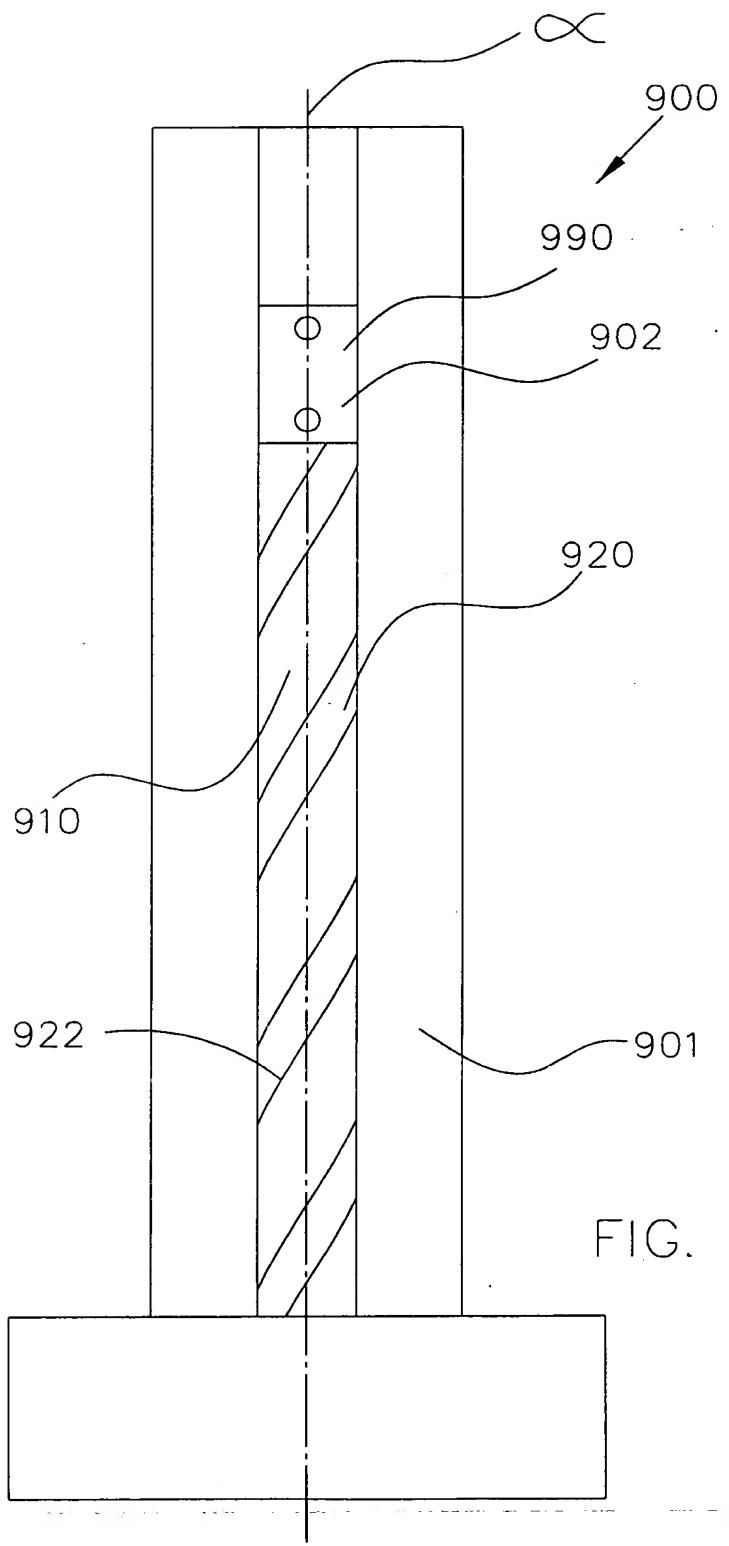


FIG. 9A



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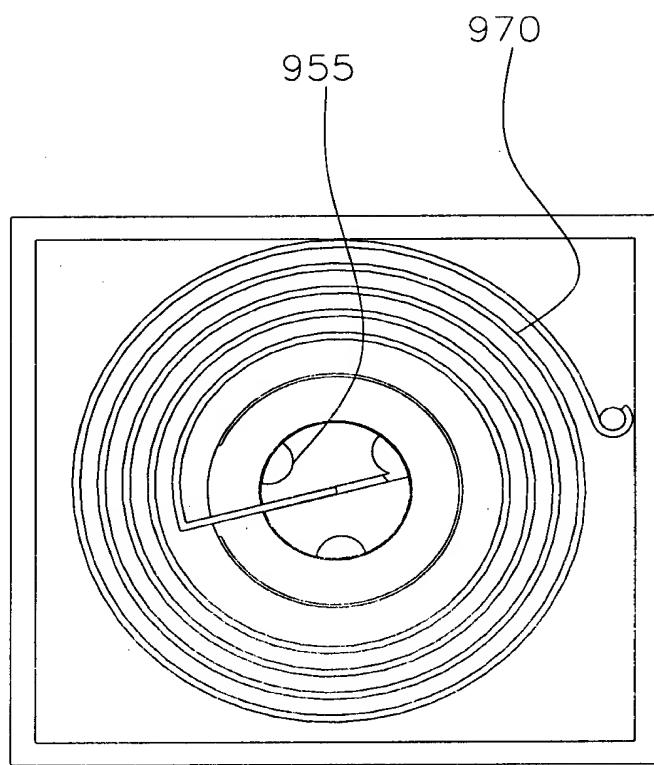


FIG. 9B



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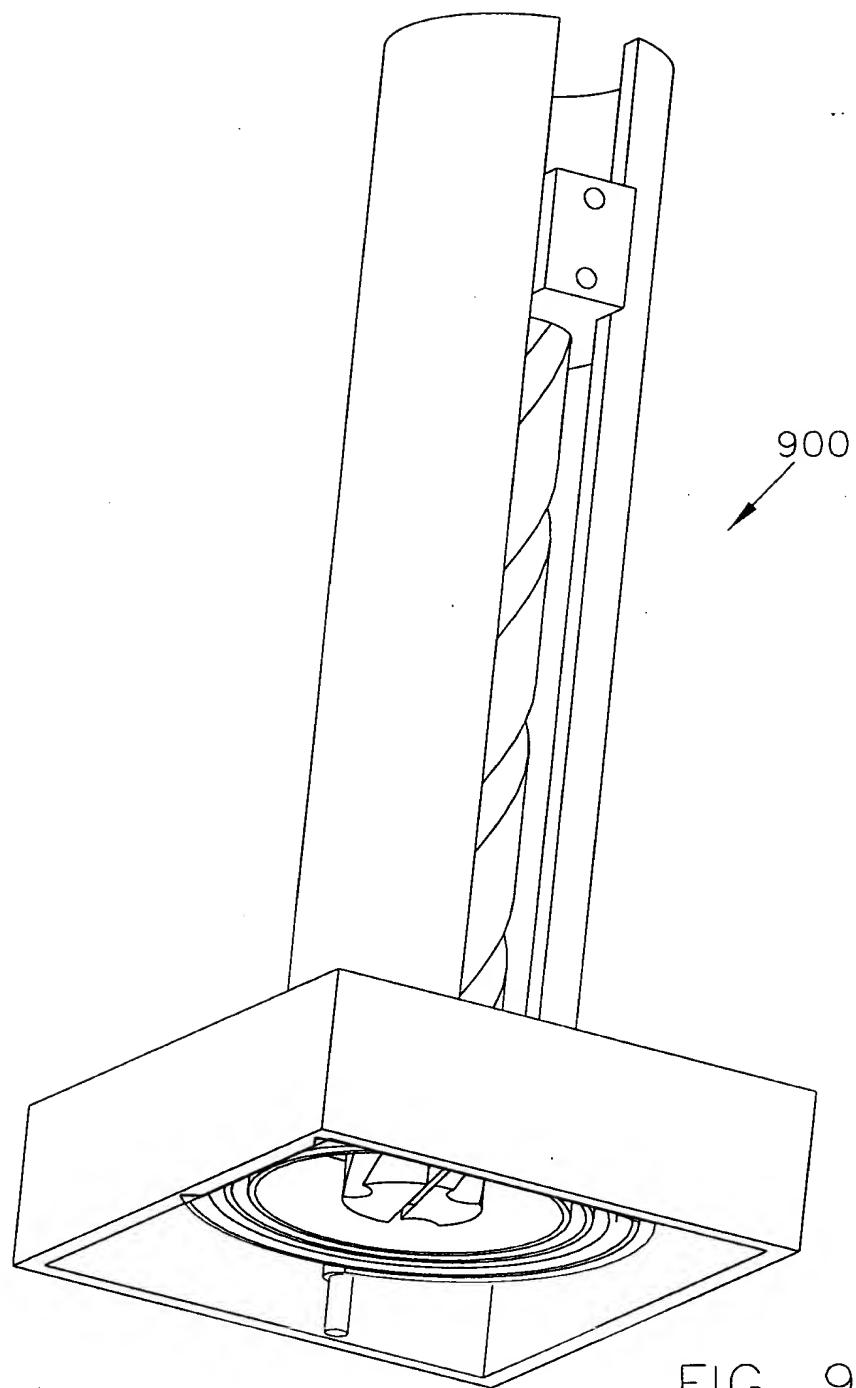


FIG. 9C



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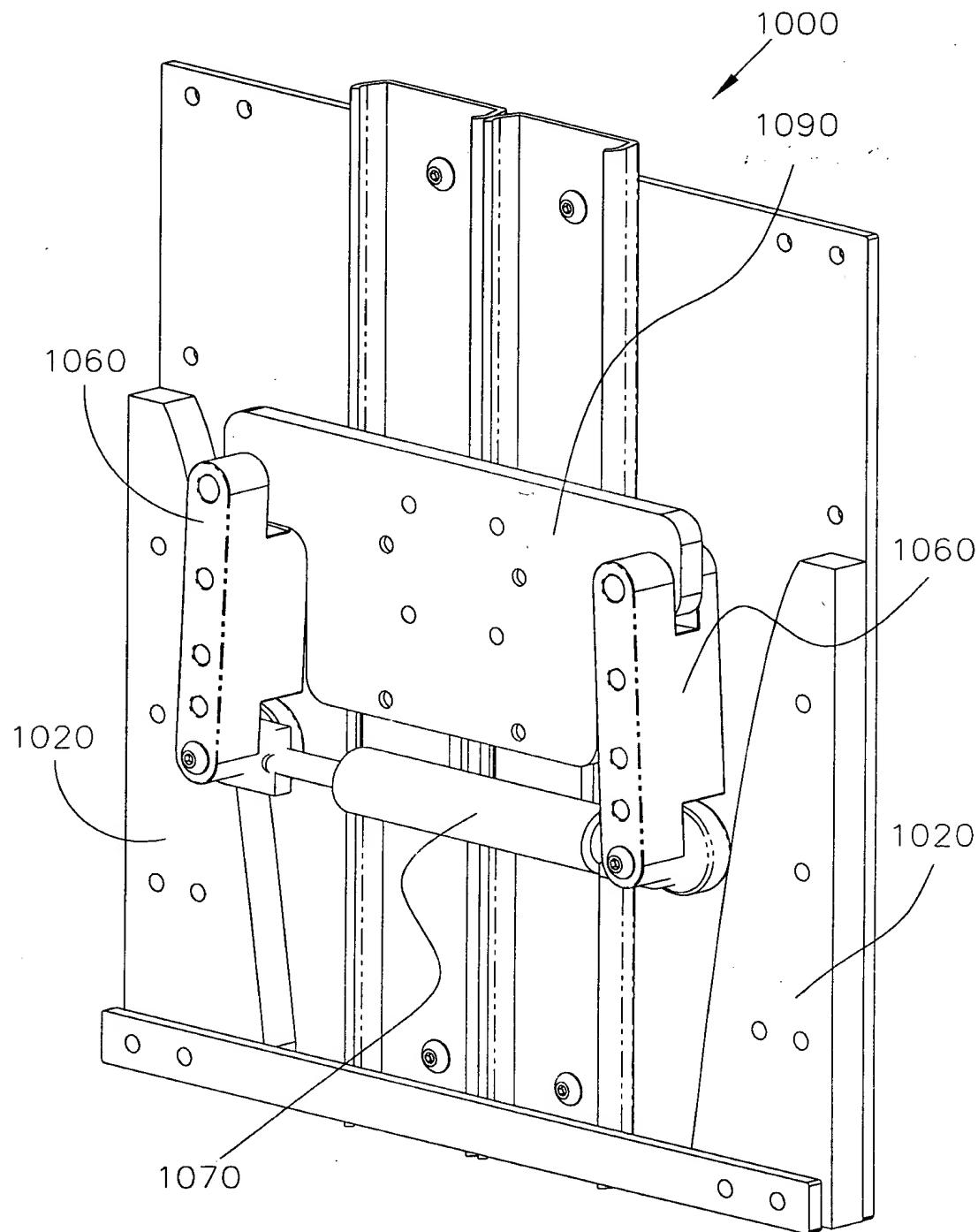


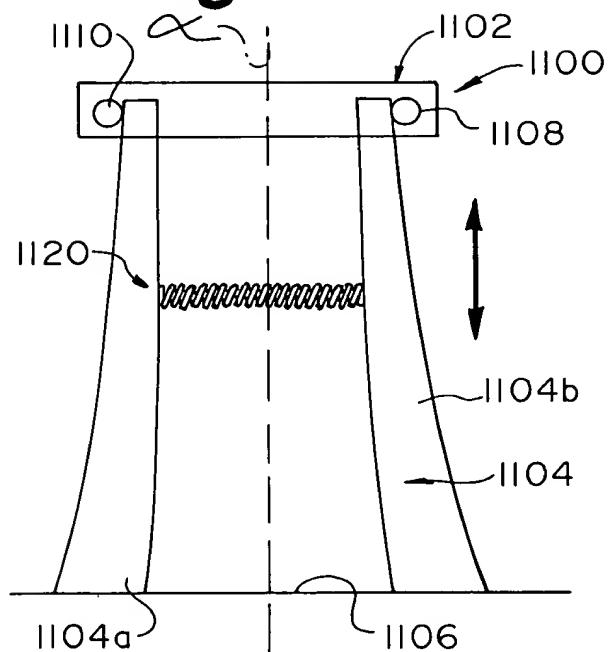
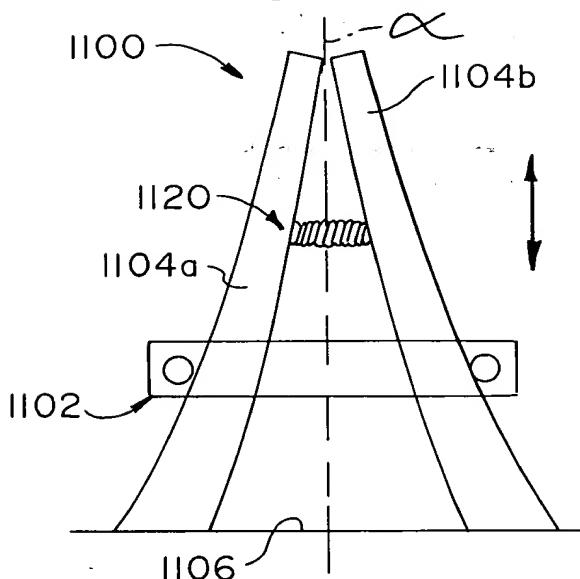
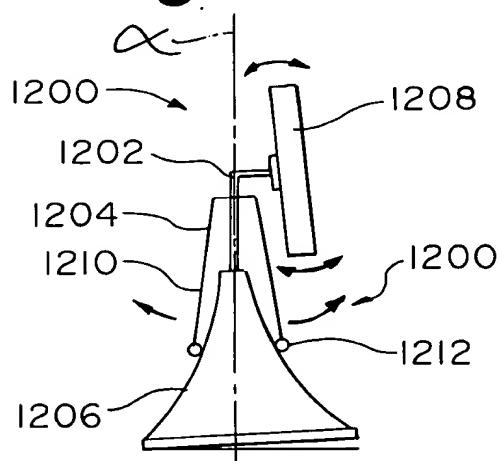
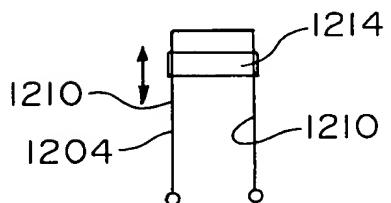
FIG. 10



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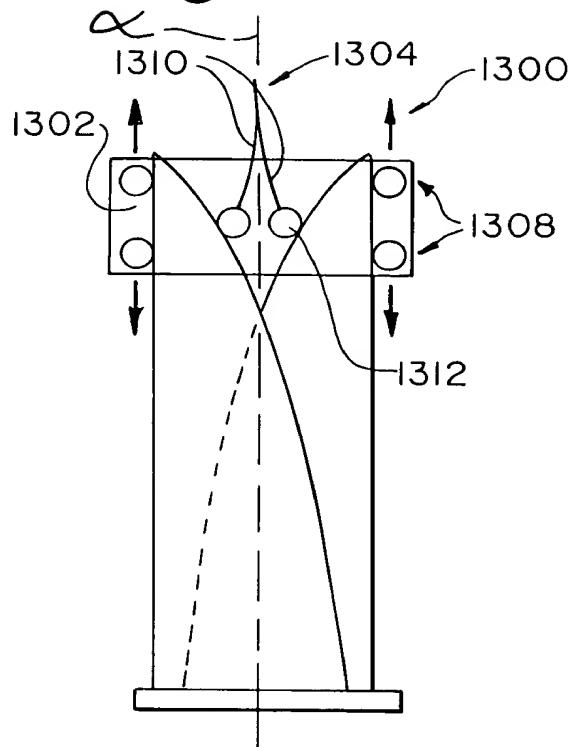
**Fig. 11A****Fig. 11B****Fig. 12A****Fig. 12B**



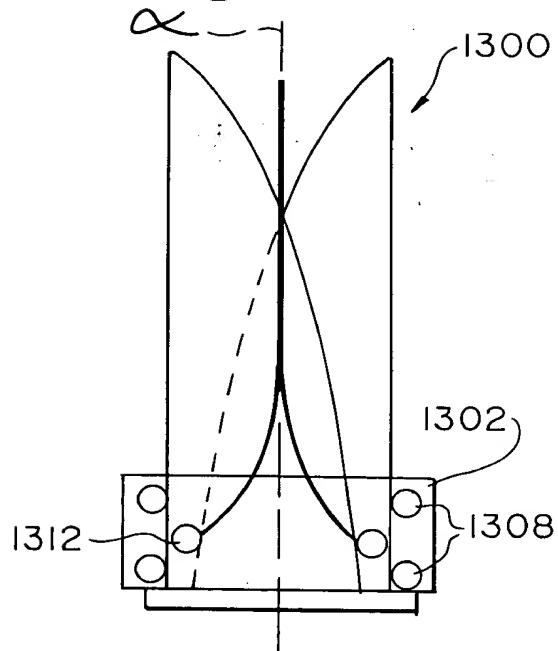
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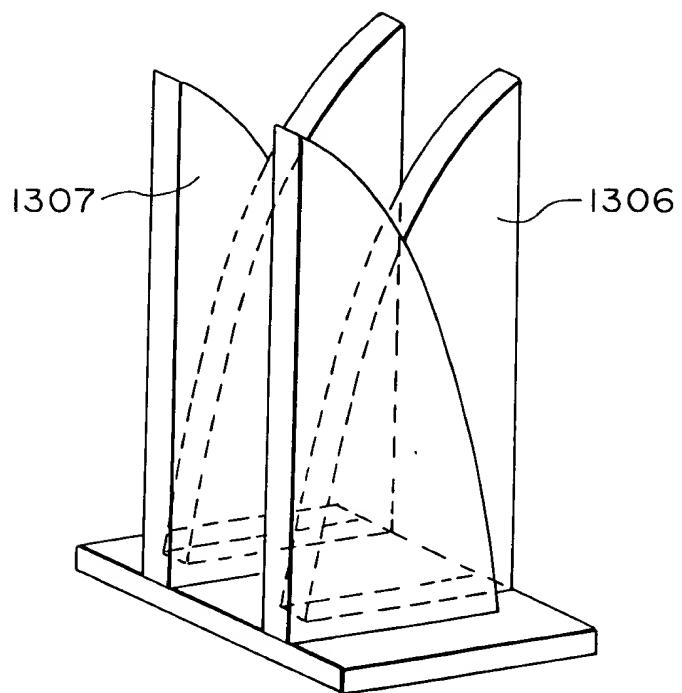
**Fig. 13A**



**Fig. 13B**

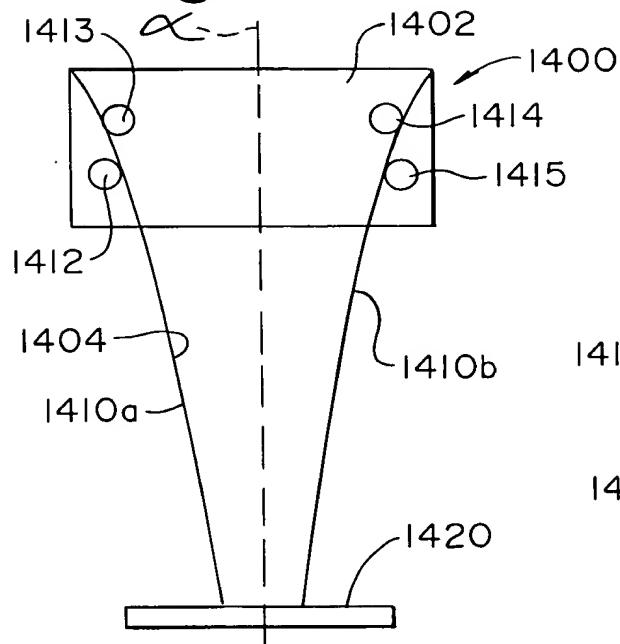
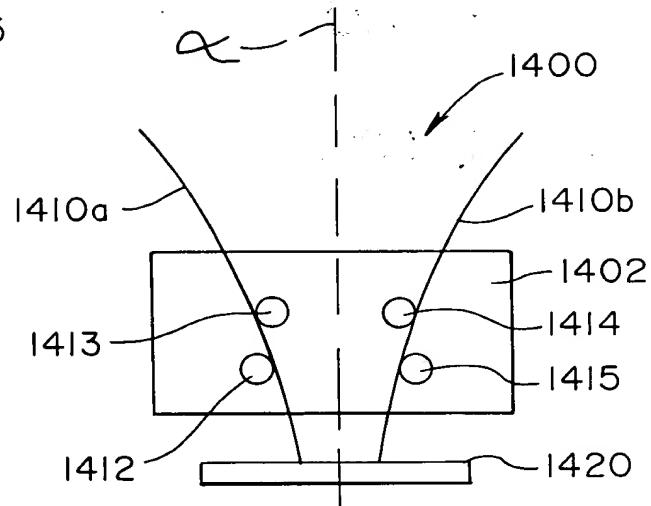
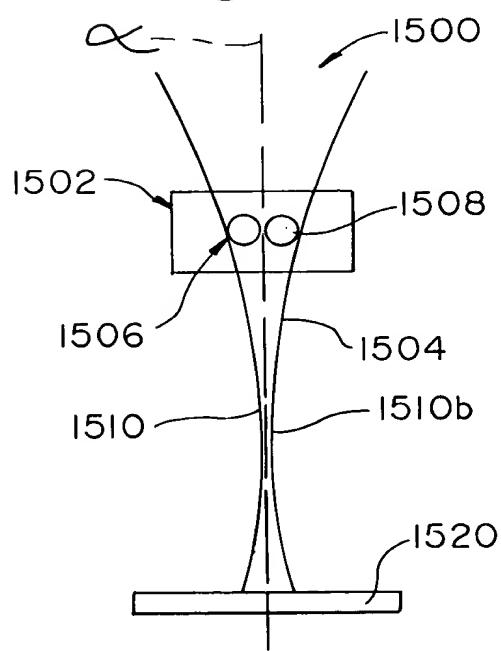
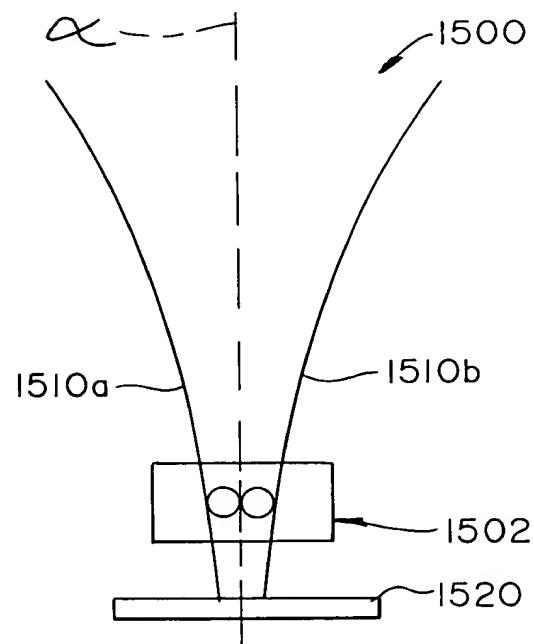


**Fig. 13C**





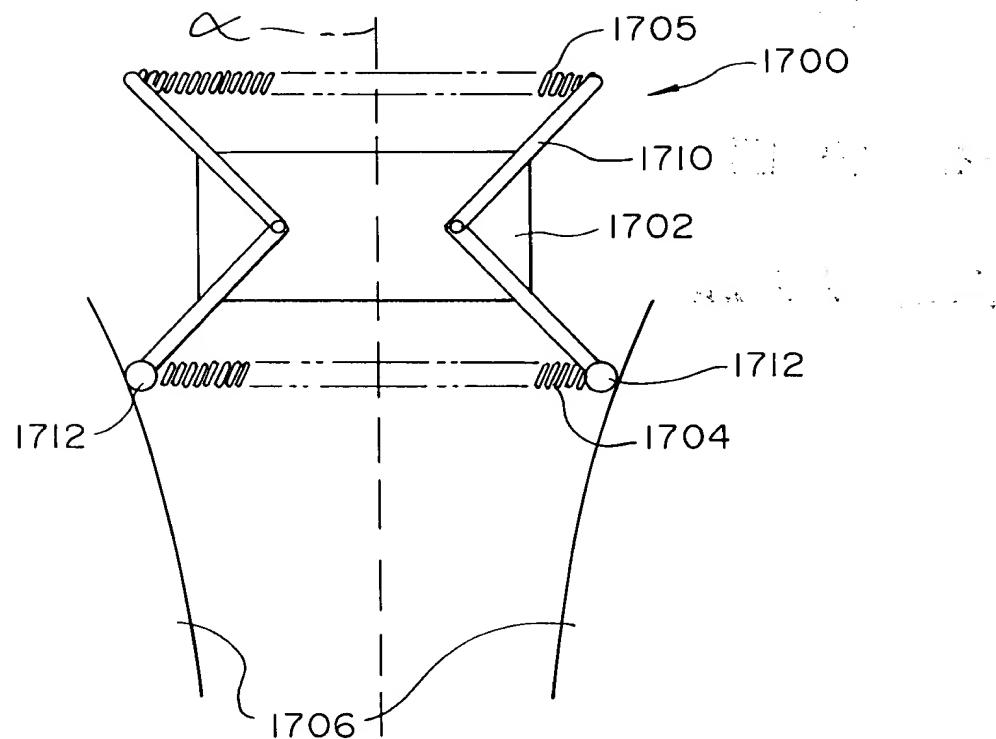
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**Fig. 14A****Fig. 14B****Fig. 15****Fig. 16**

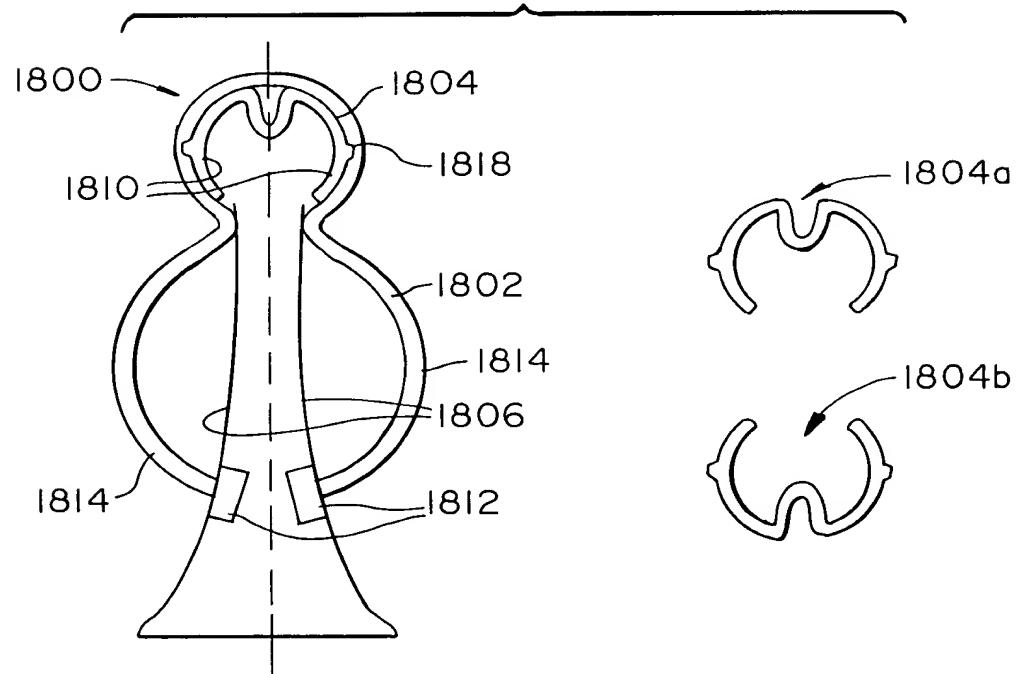


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**Fig. 17**



**Fig. 18**

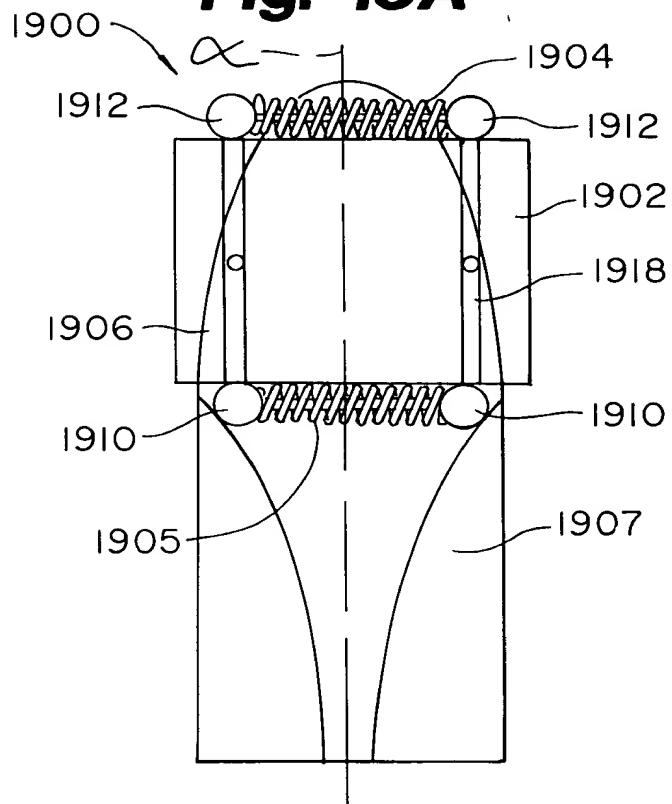
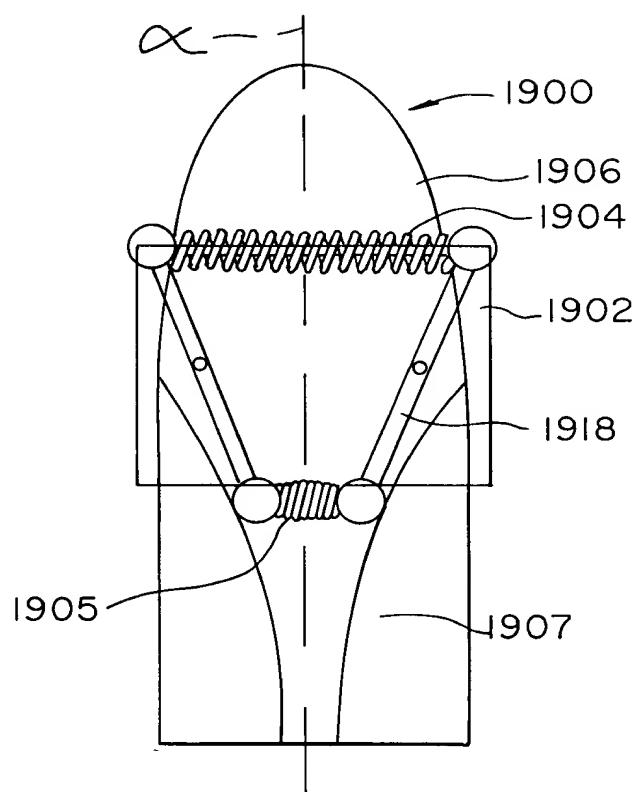




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**Fig. 19A****Fig. 19B**



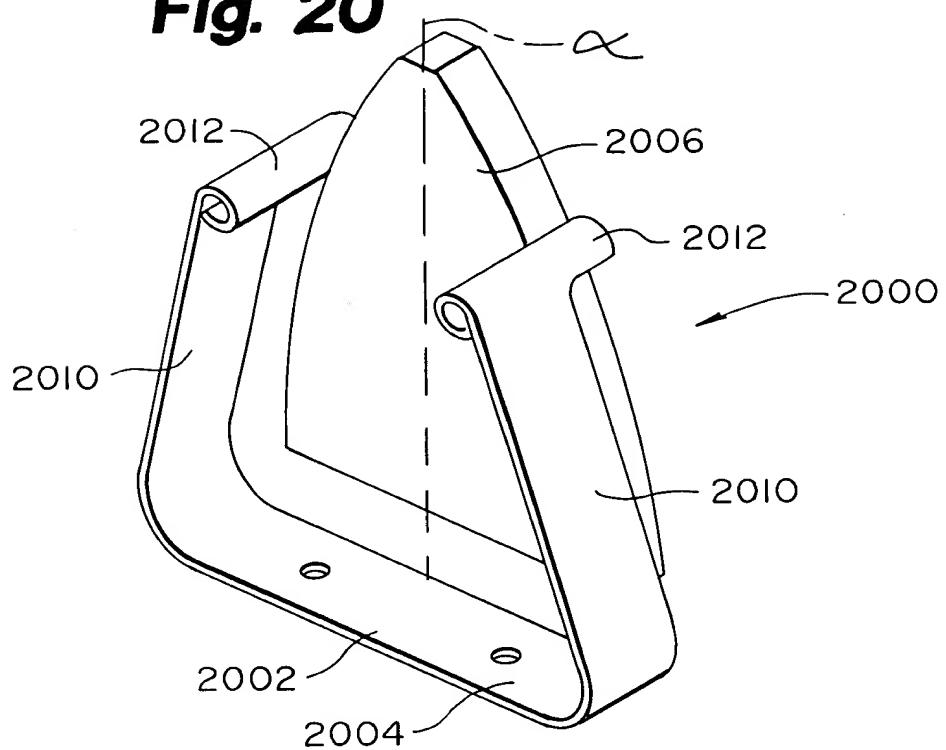
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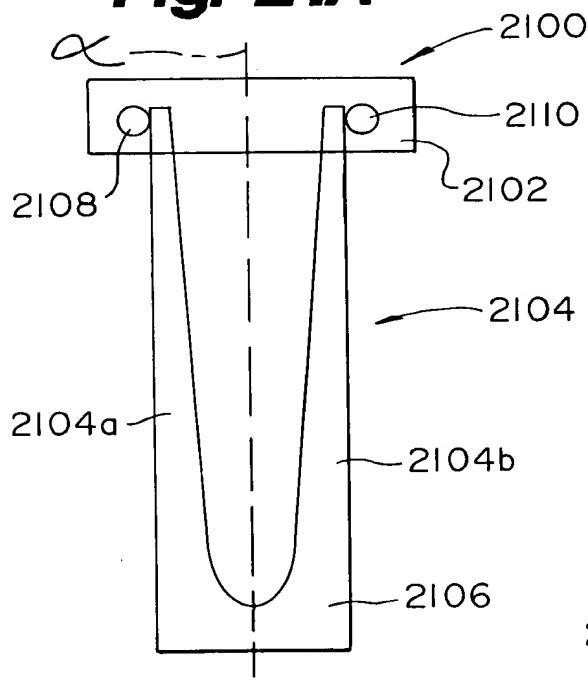
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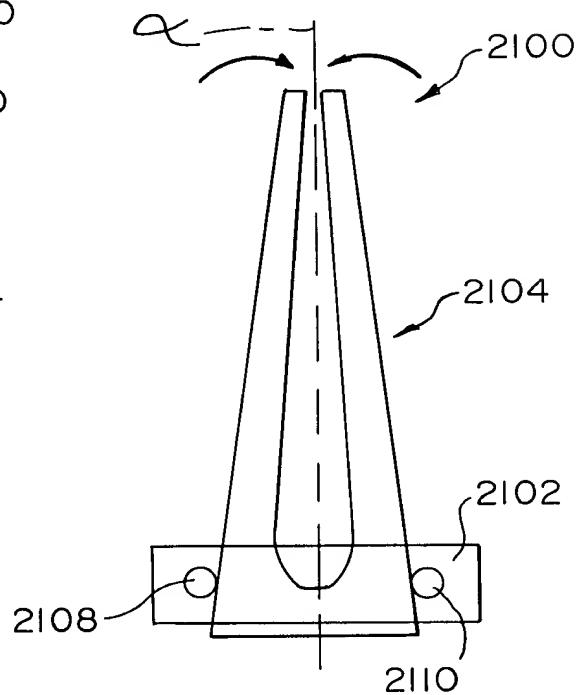
**Fig. 20**



**Fig. 21A**



**Fig. 21B**

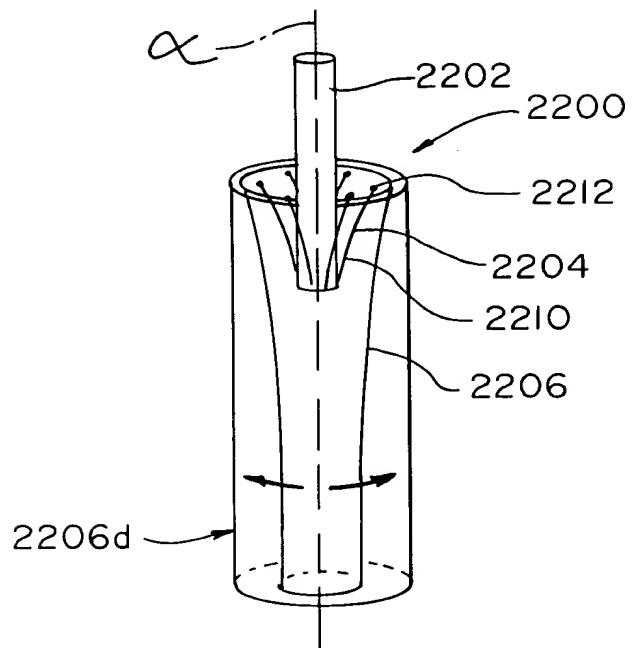




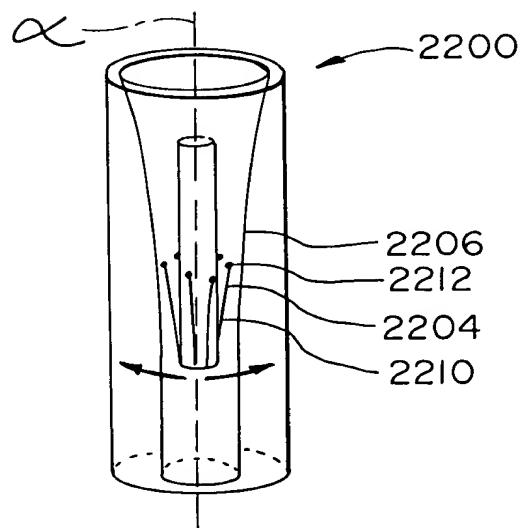
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**Fig. 22A**



**Fig. 22B**



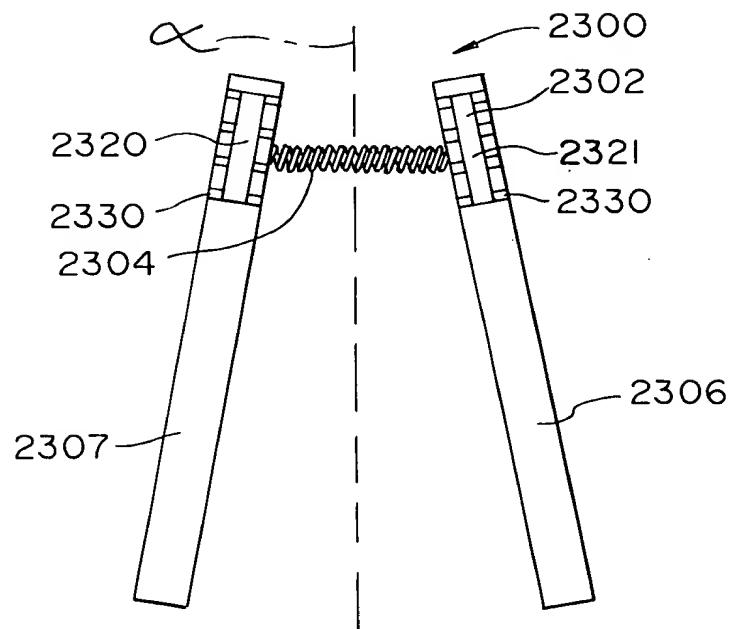


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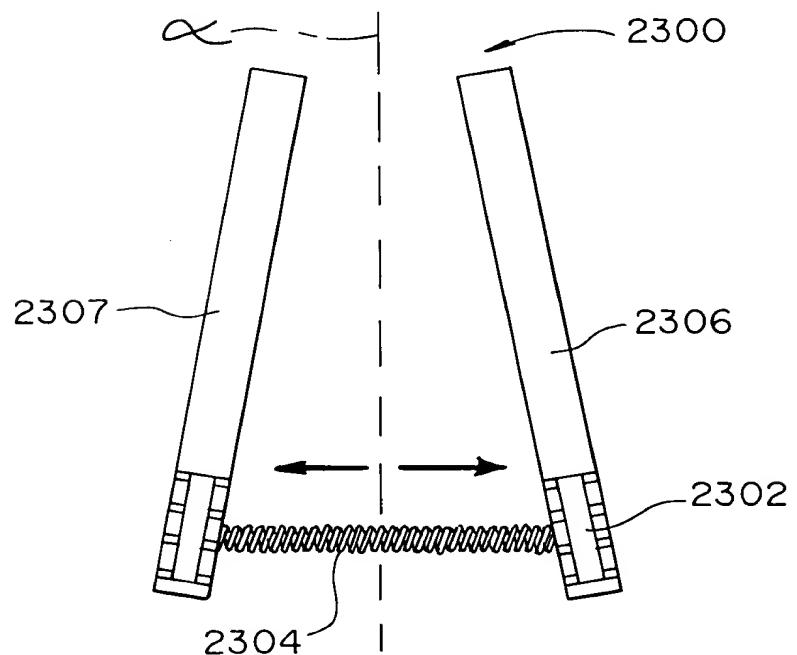
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**Fig. 23A**



**Fig. 23B**



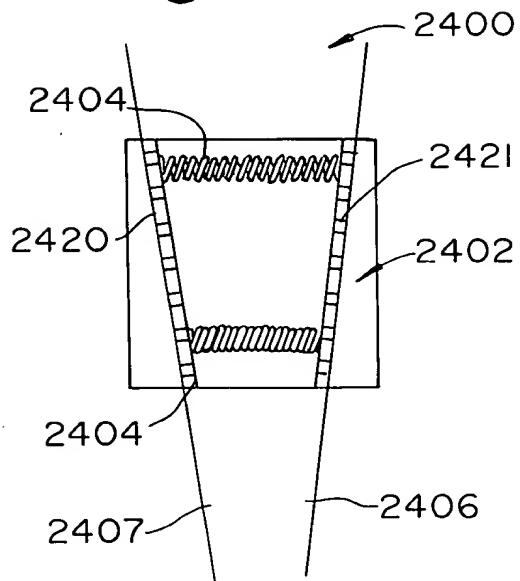


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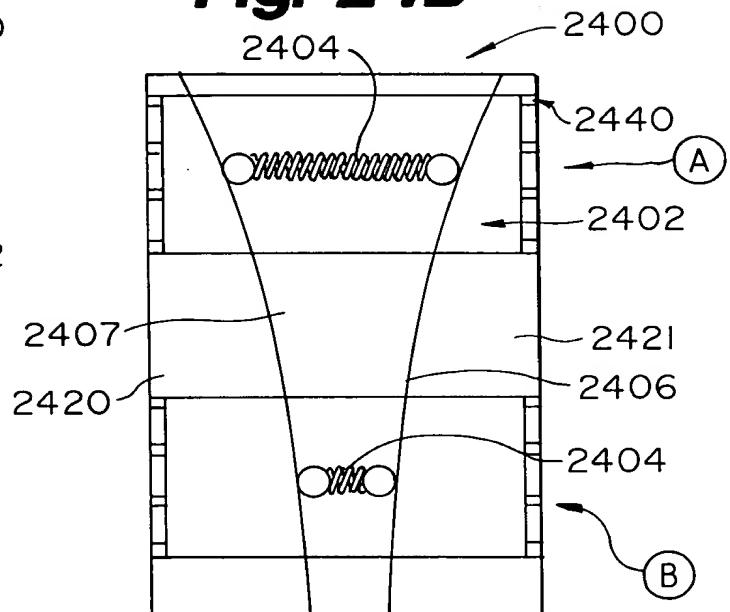
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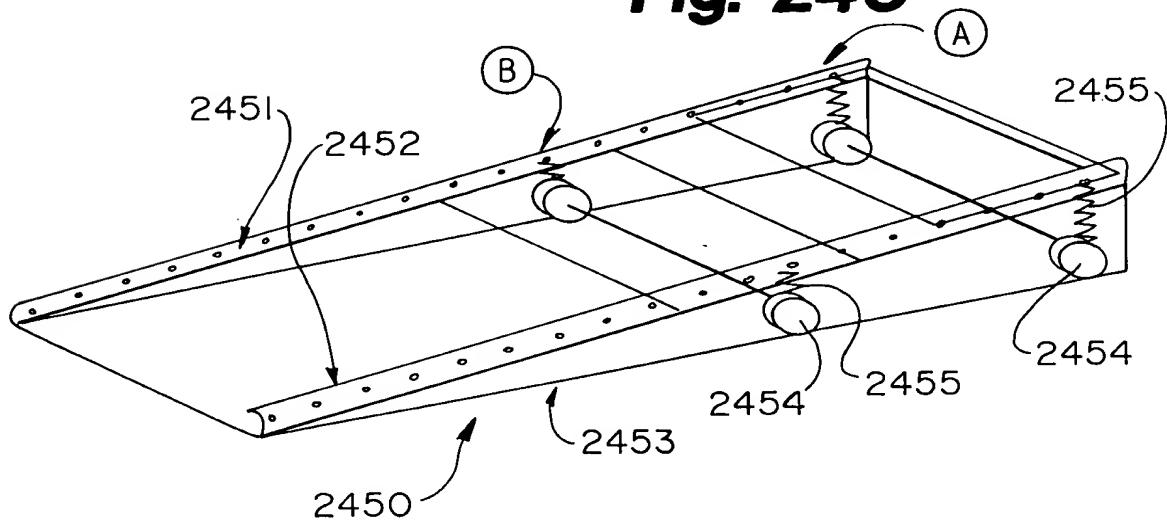
**Fig. 24A**



**Fig. 24B**



**Fig. 24C**

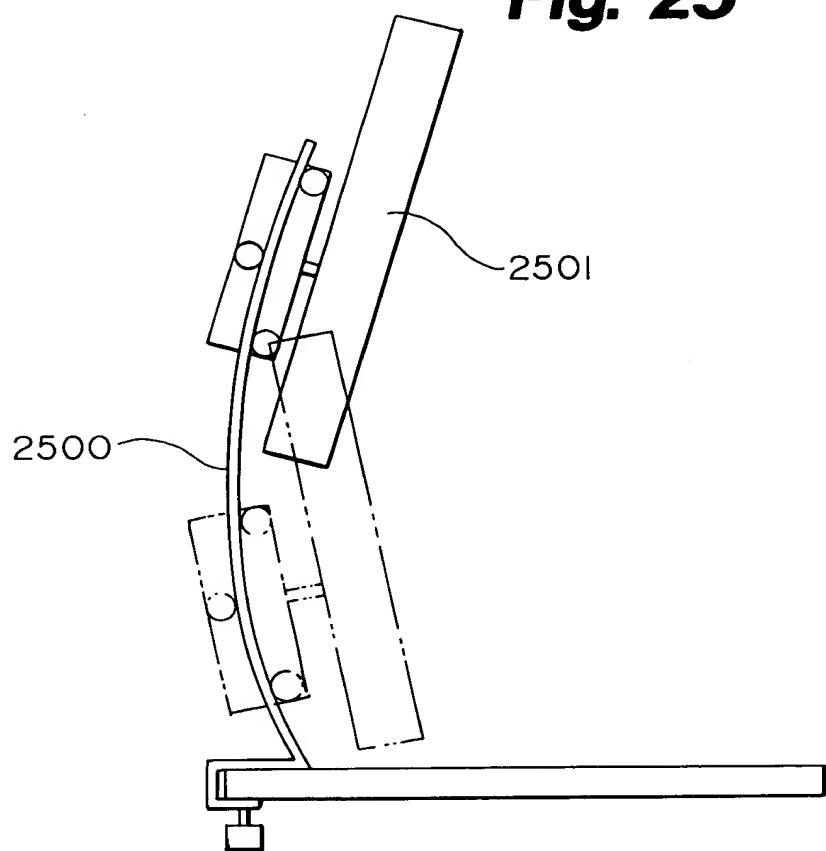




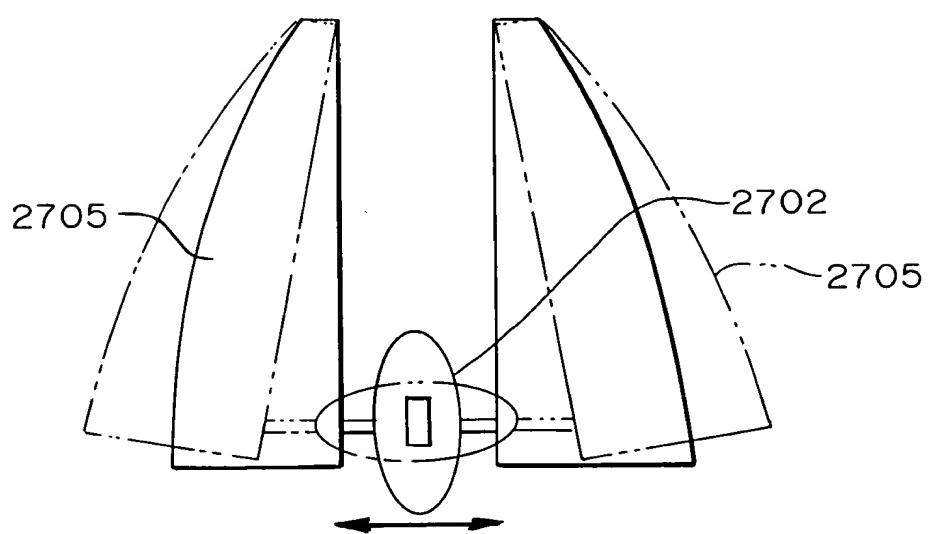
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**Fig. 25**



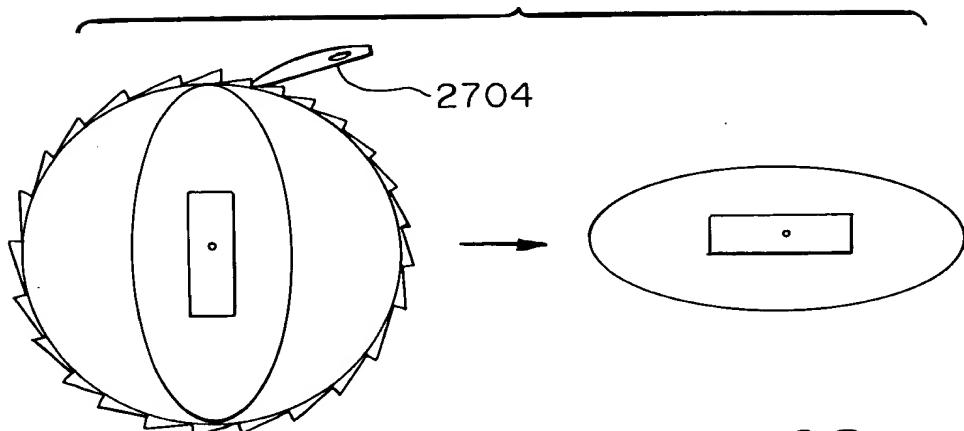
**Fig. 26**



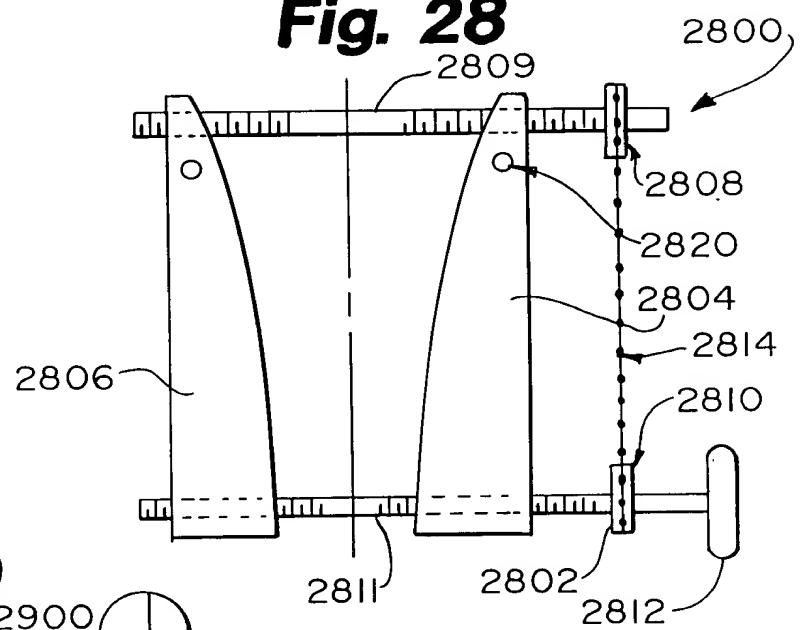


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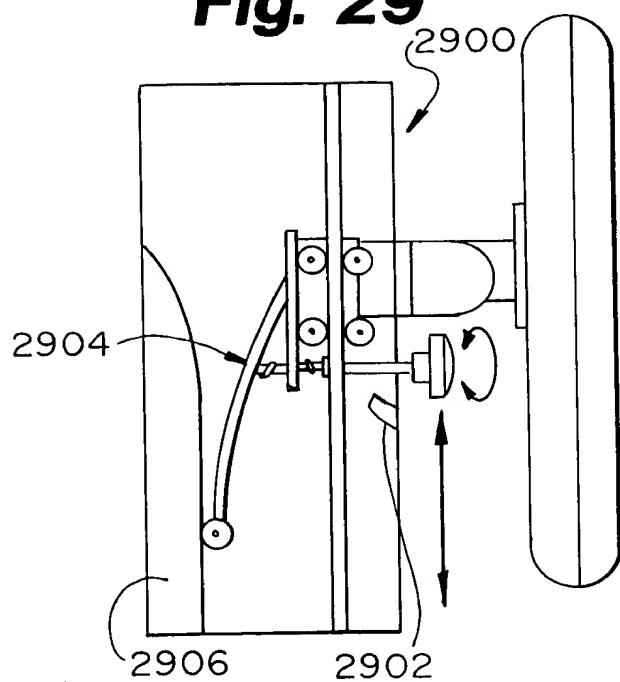
26/68  
**Fig. 27**



**Fig. 28**

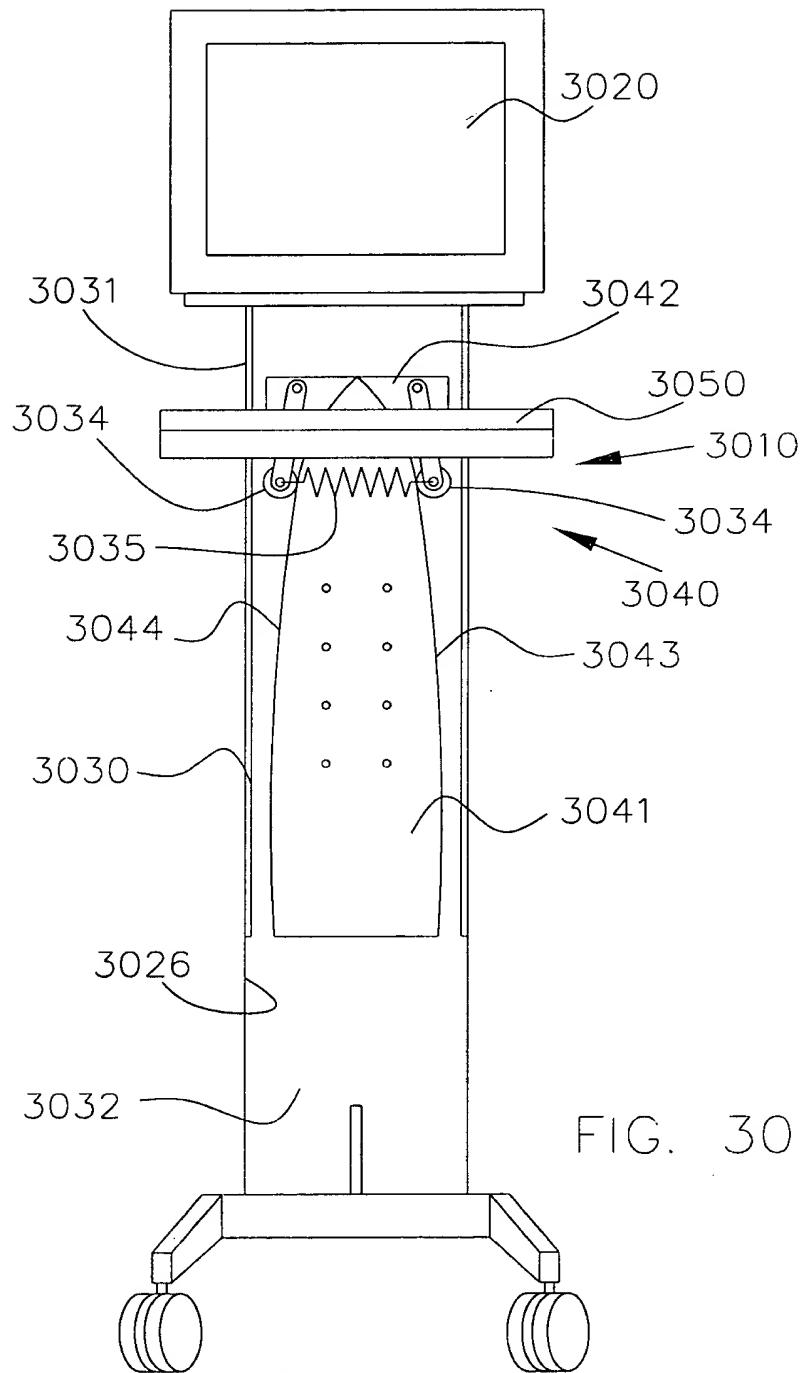


**Fig. 29**





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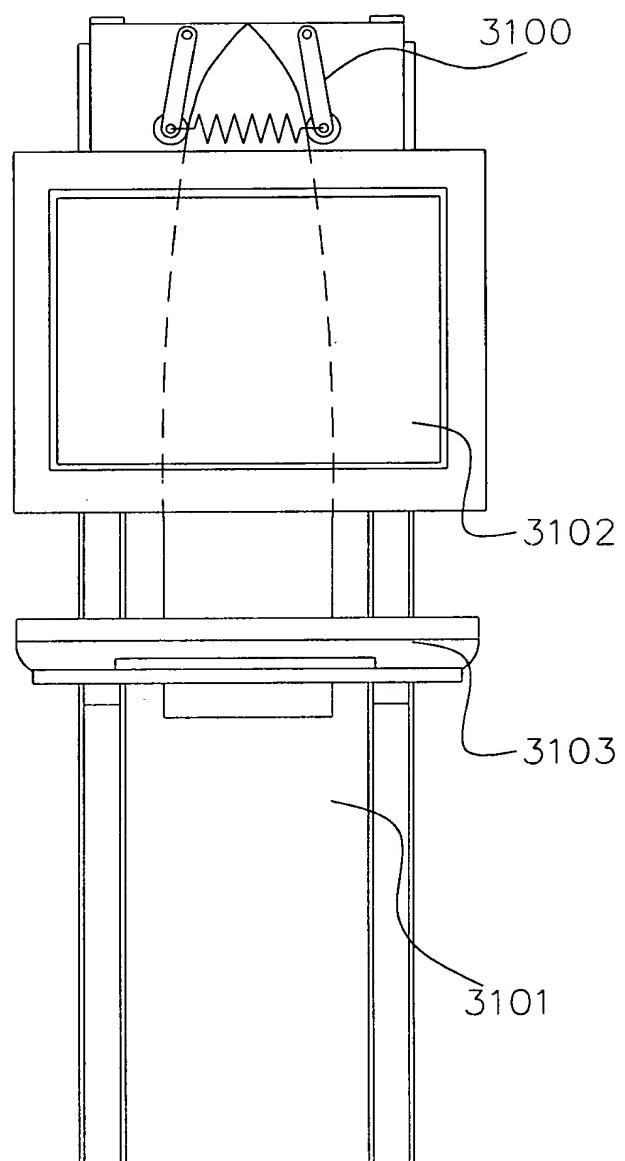


FIG. 31A



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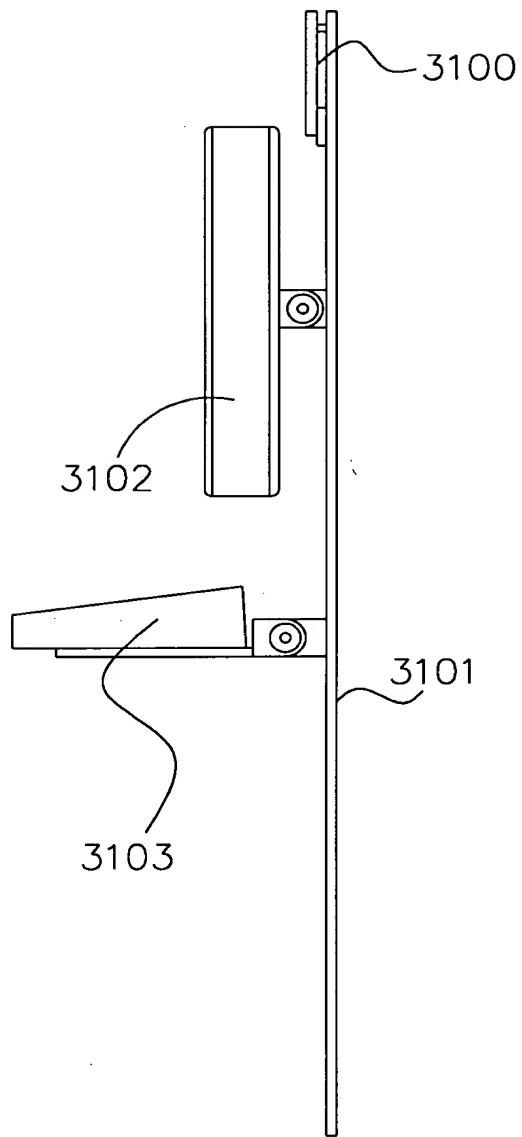


FIG. 31B



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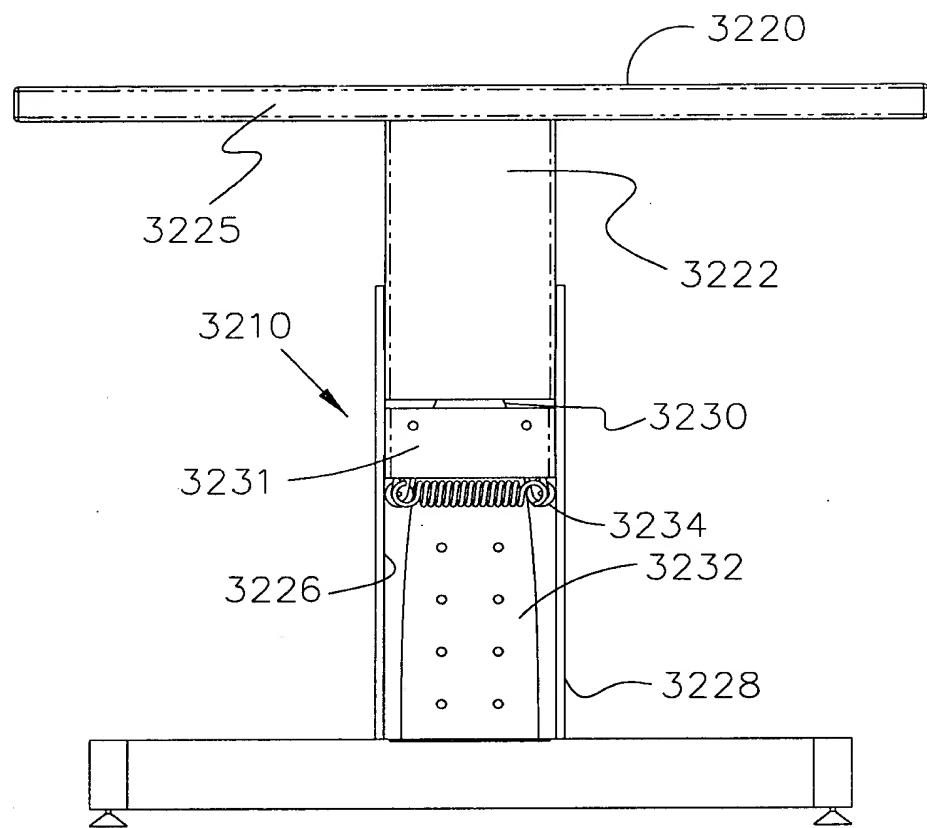


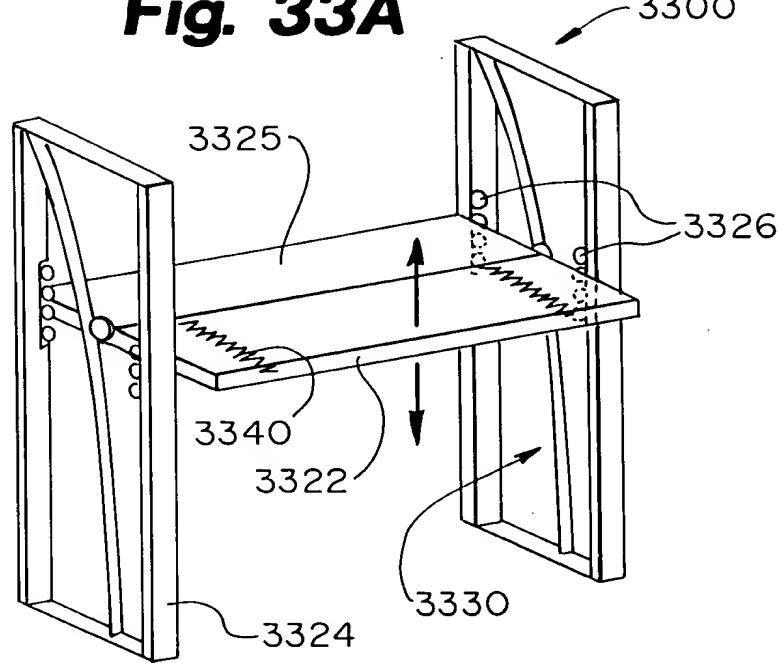
FIG. 32



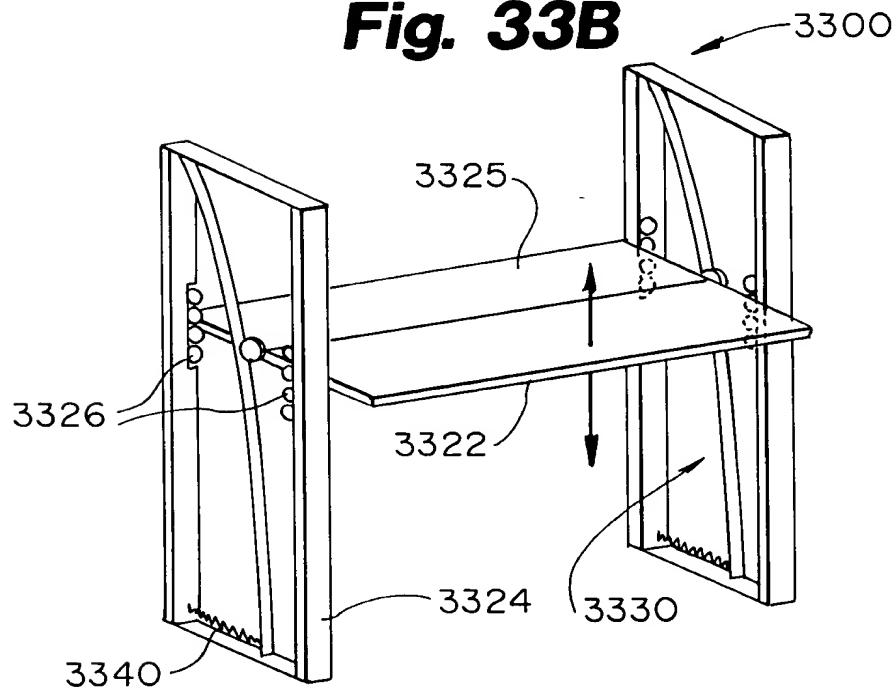
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**Fig. 33A**



**Fig. 33B**





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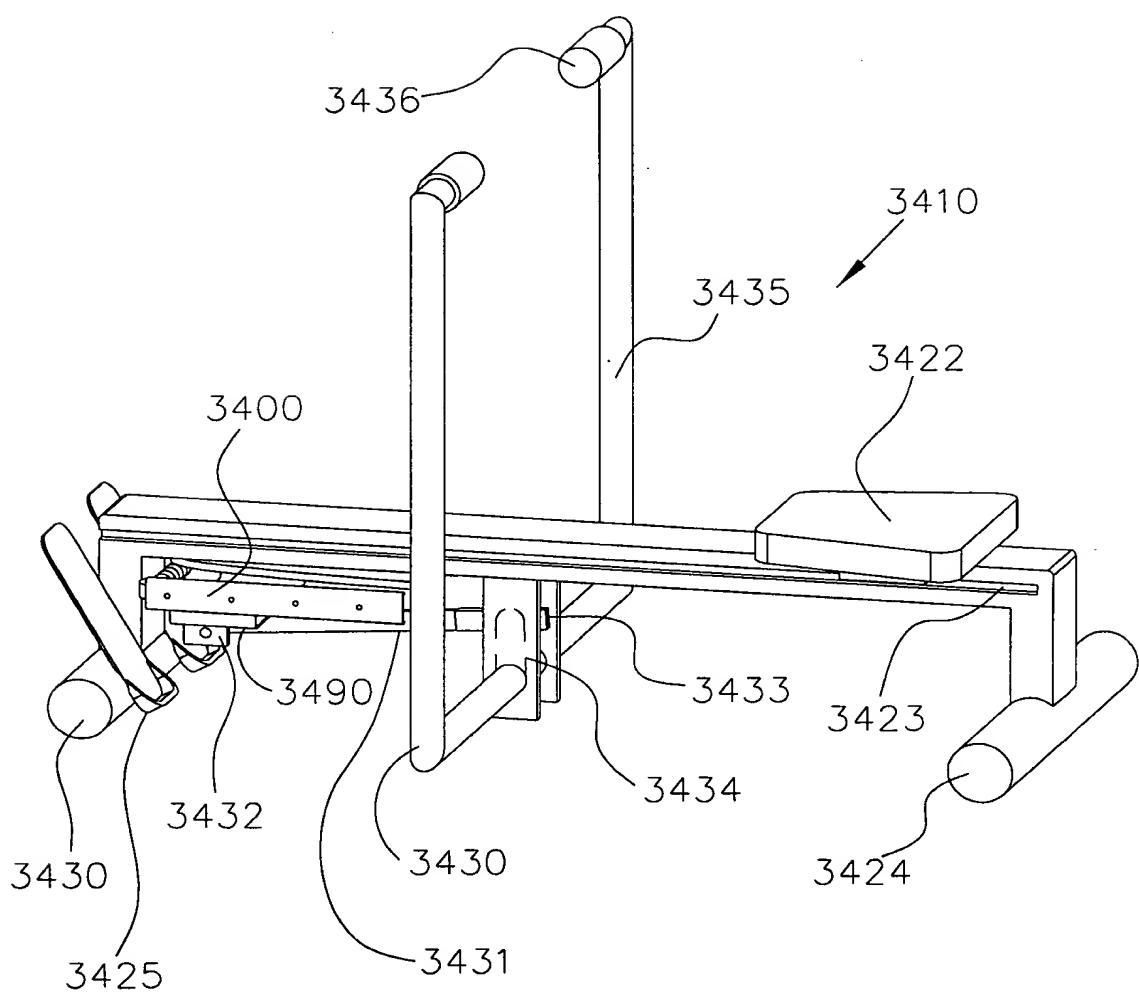


FIG. 34



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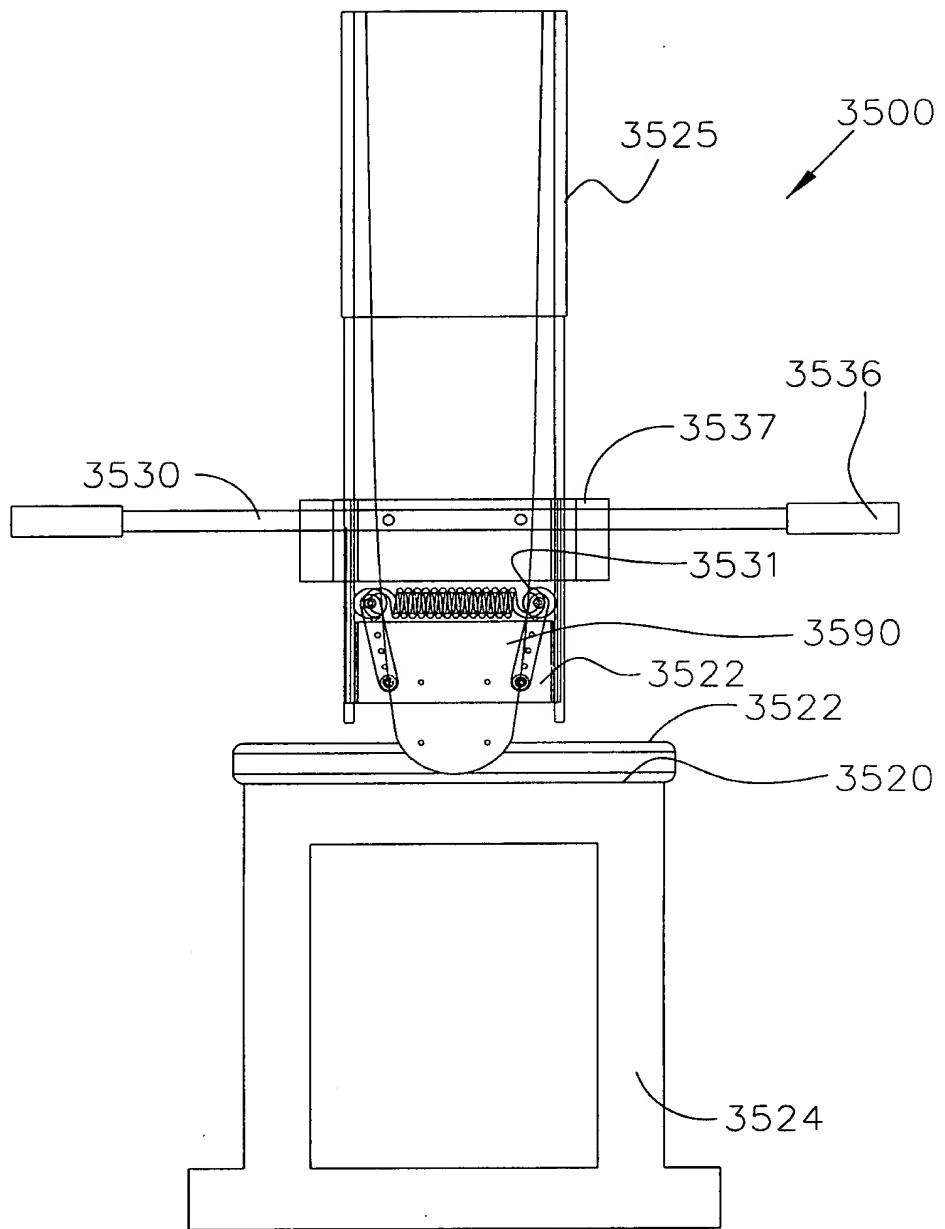
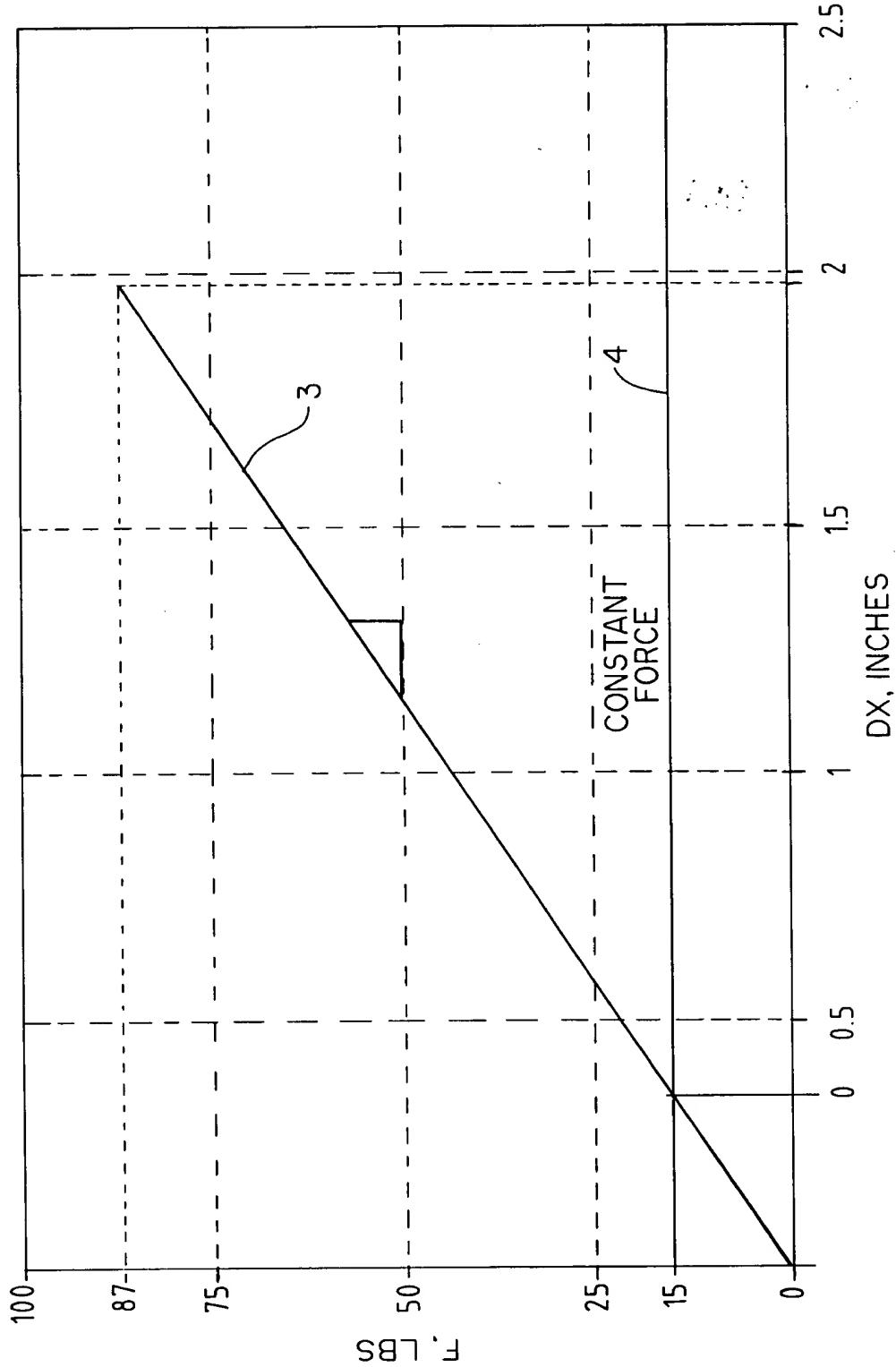


FIG. 35

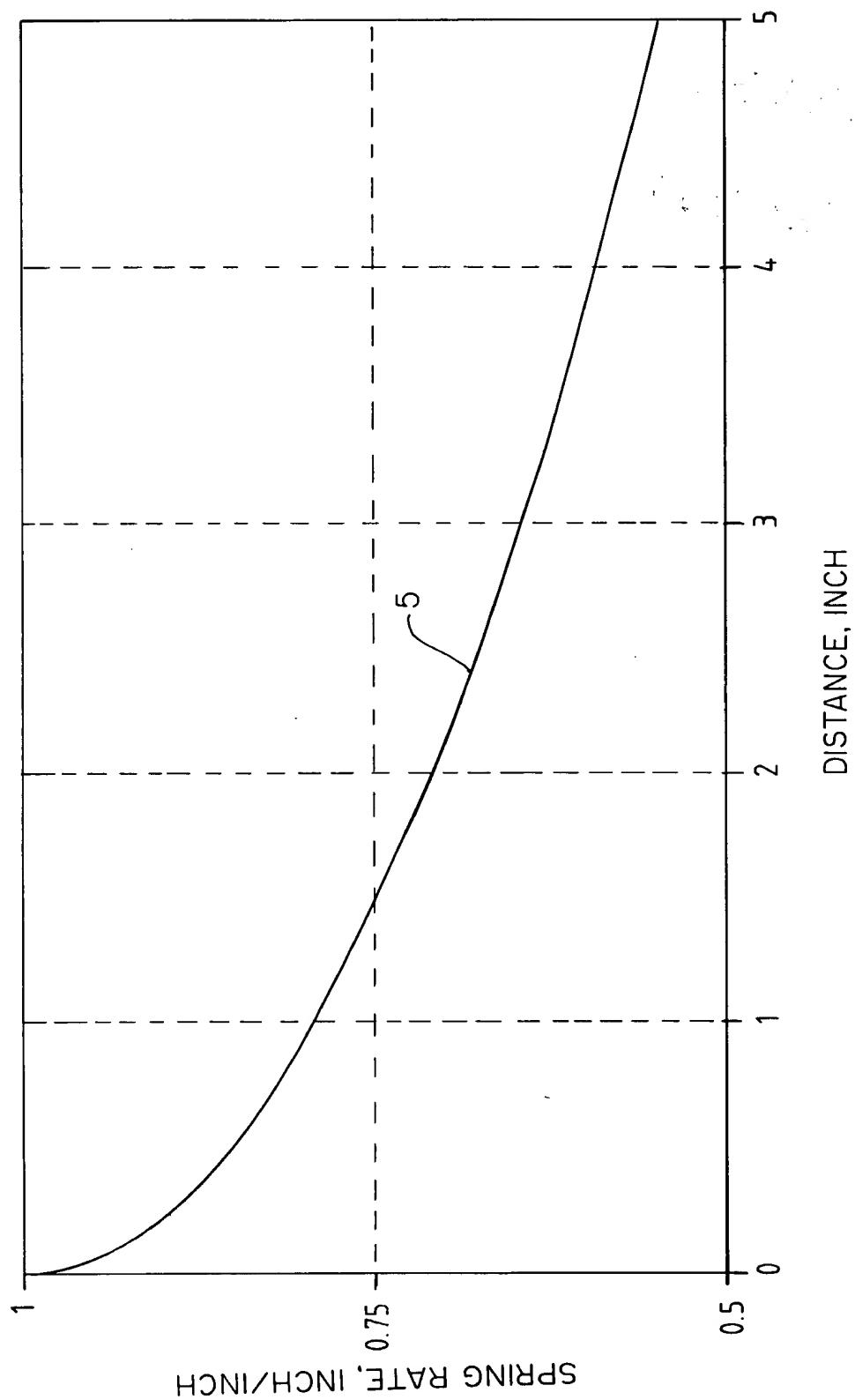


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**Fig. 36A**

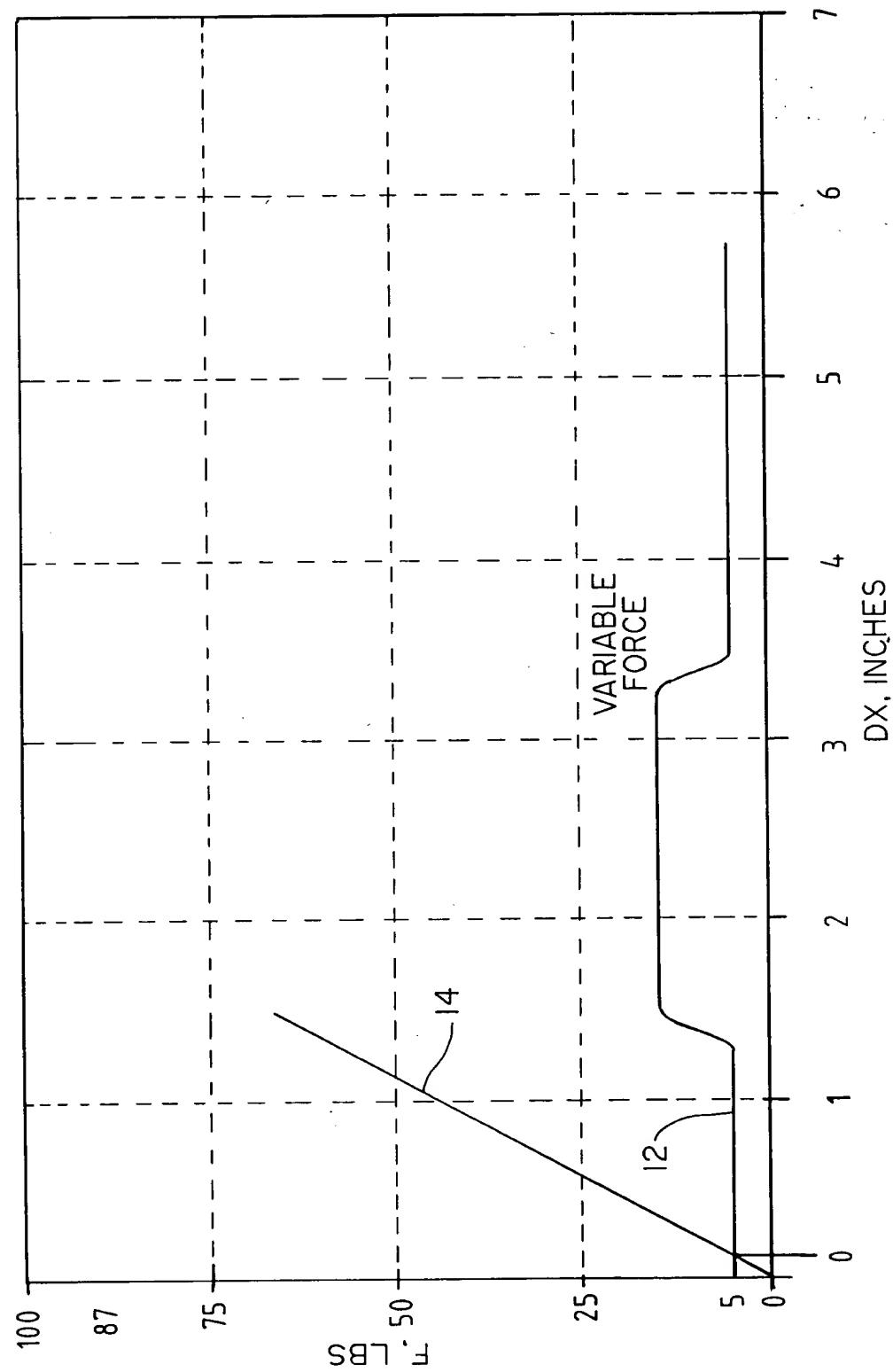


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**Fig. 36B**

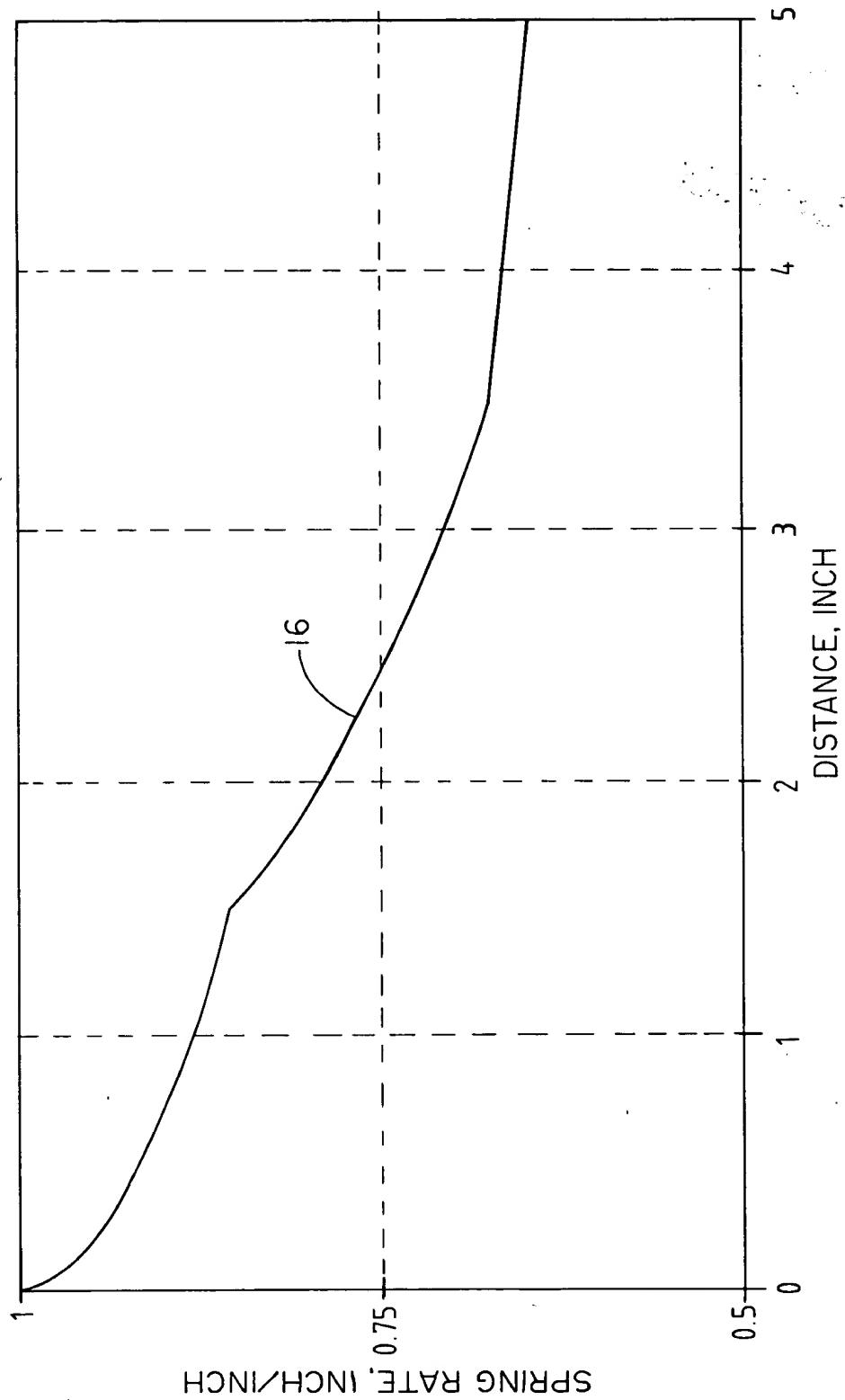


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**Fig. 37A**



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**Fig. 37B**



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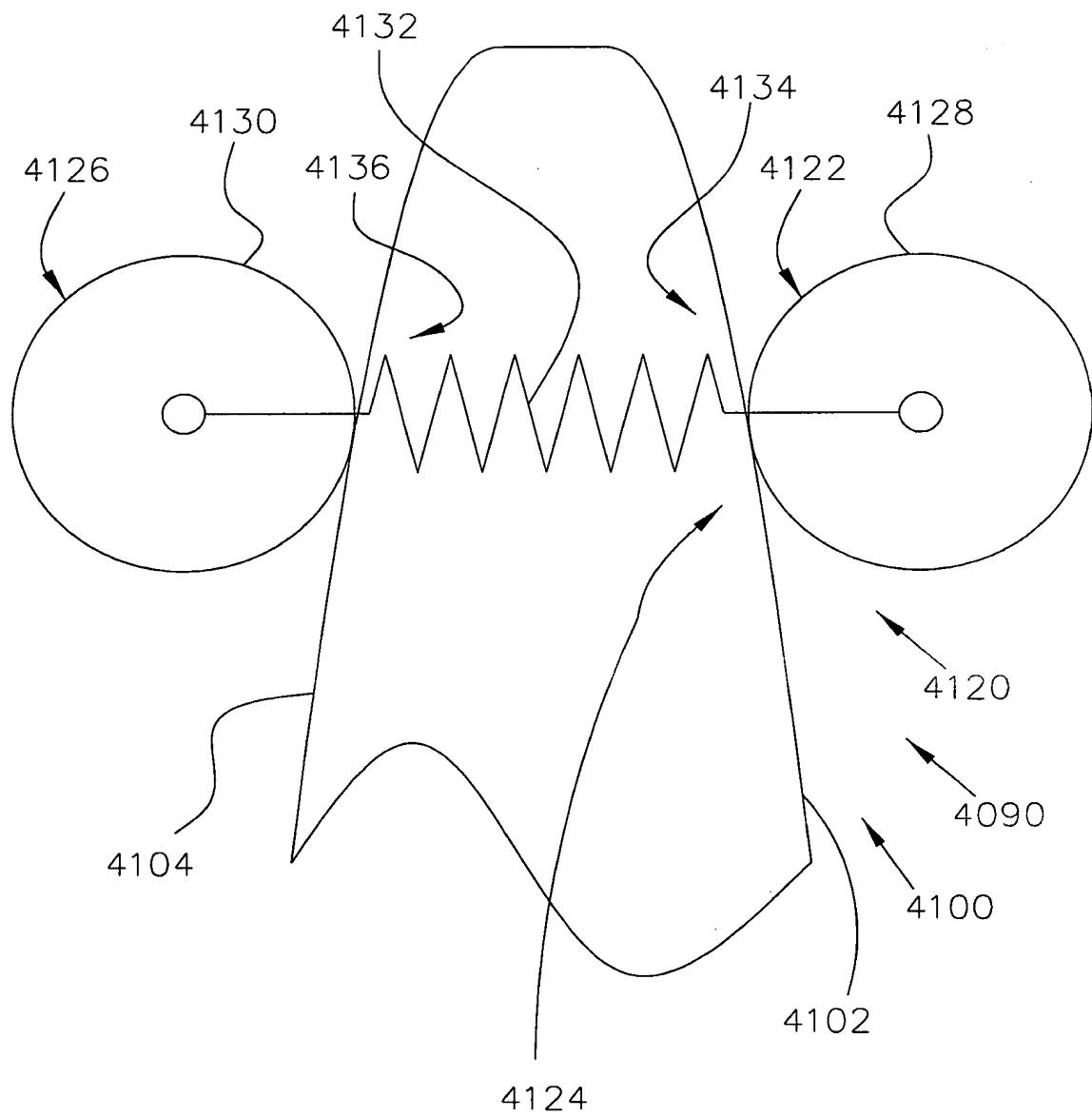


FIG. 38



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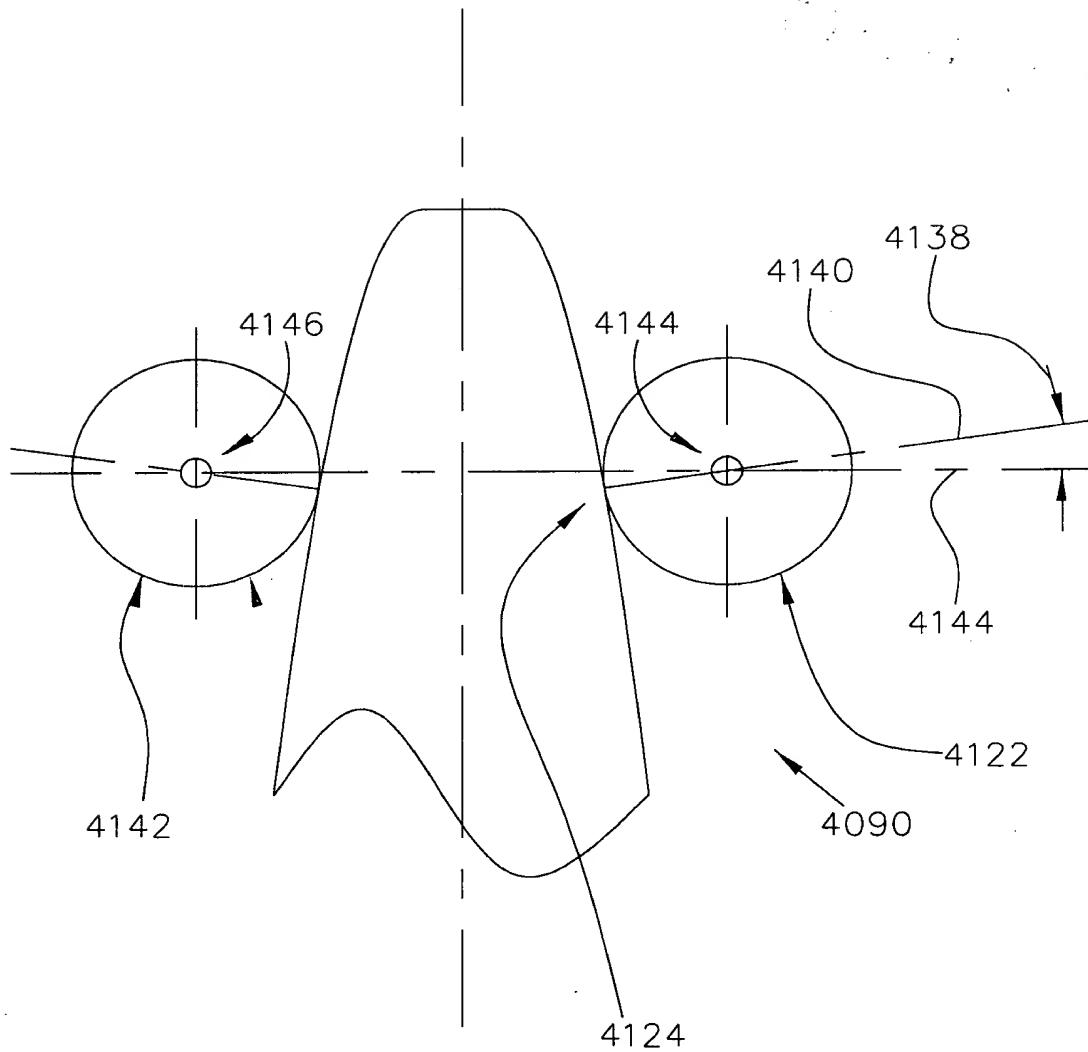


FIG. 39



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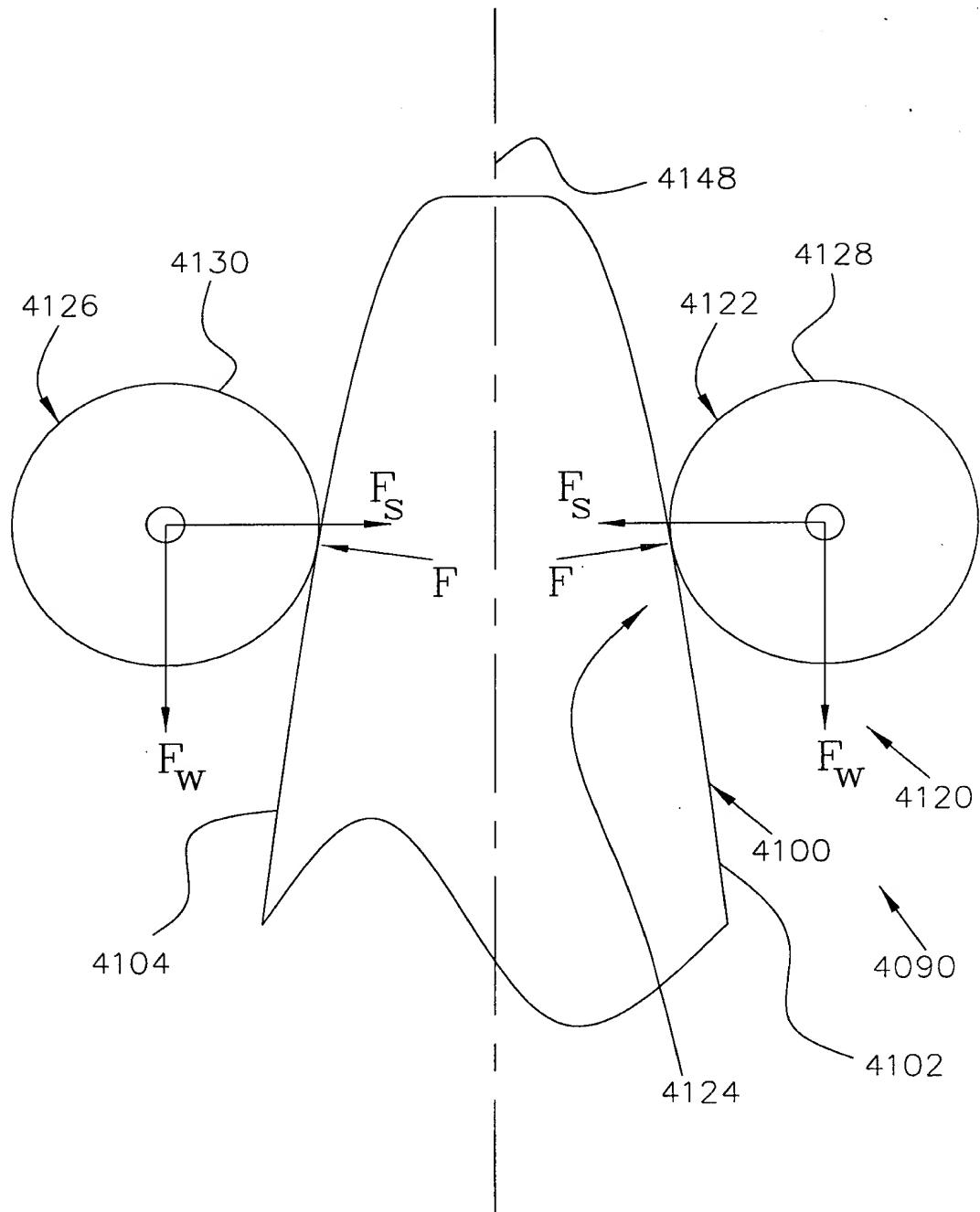


FIG. 40



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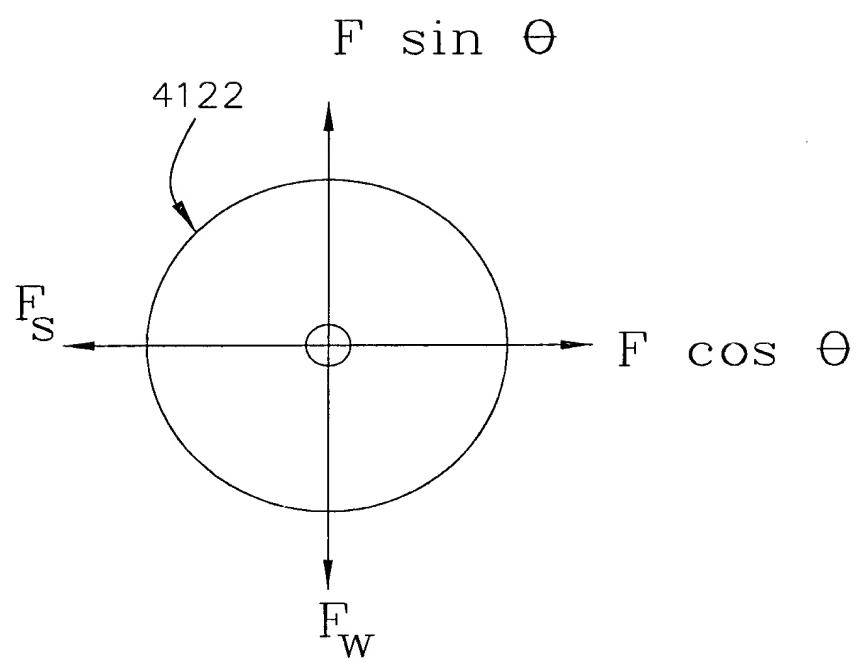


FIG. 41



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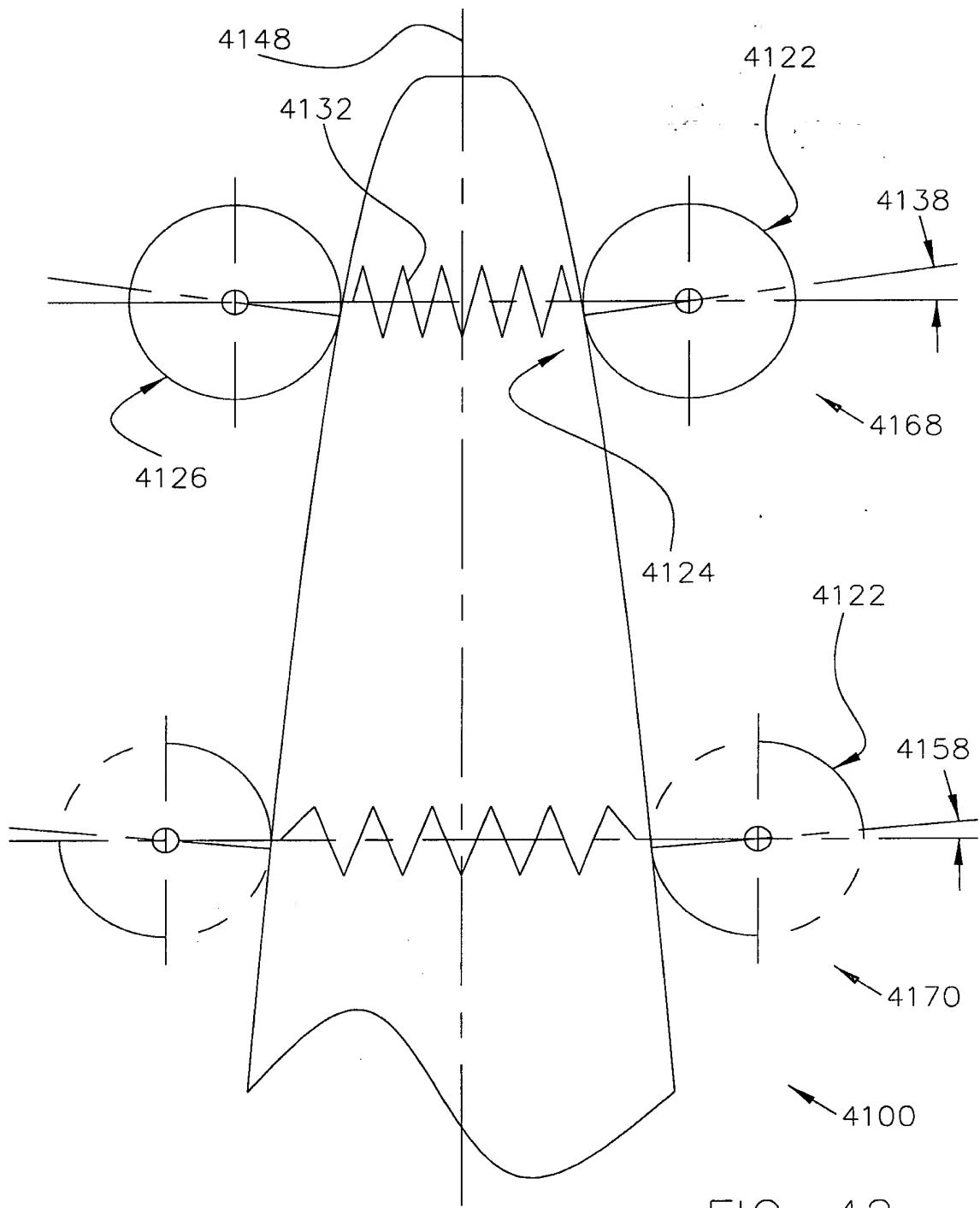


FIG. 42



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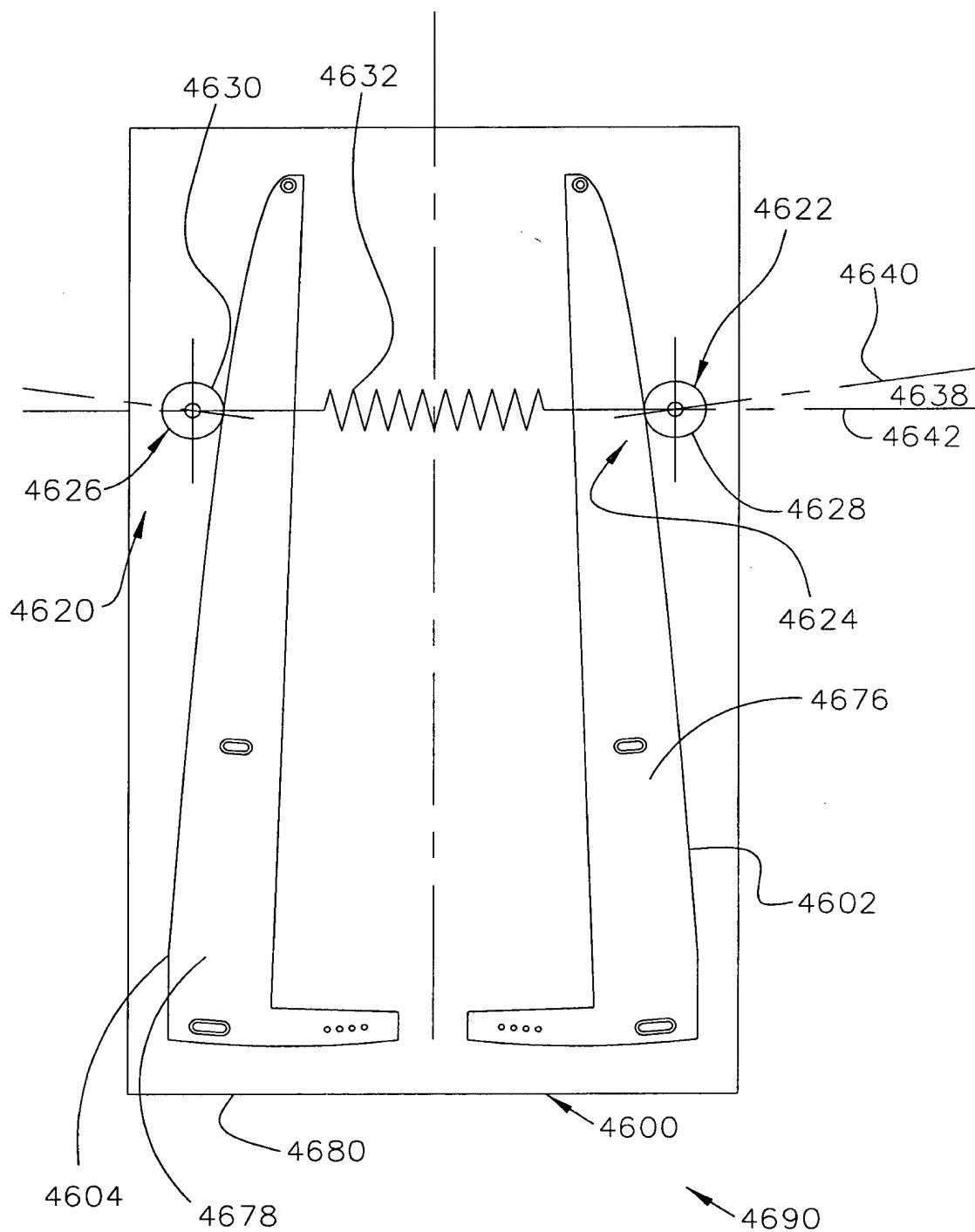


FIG. 43



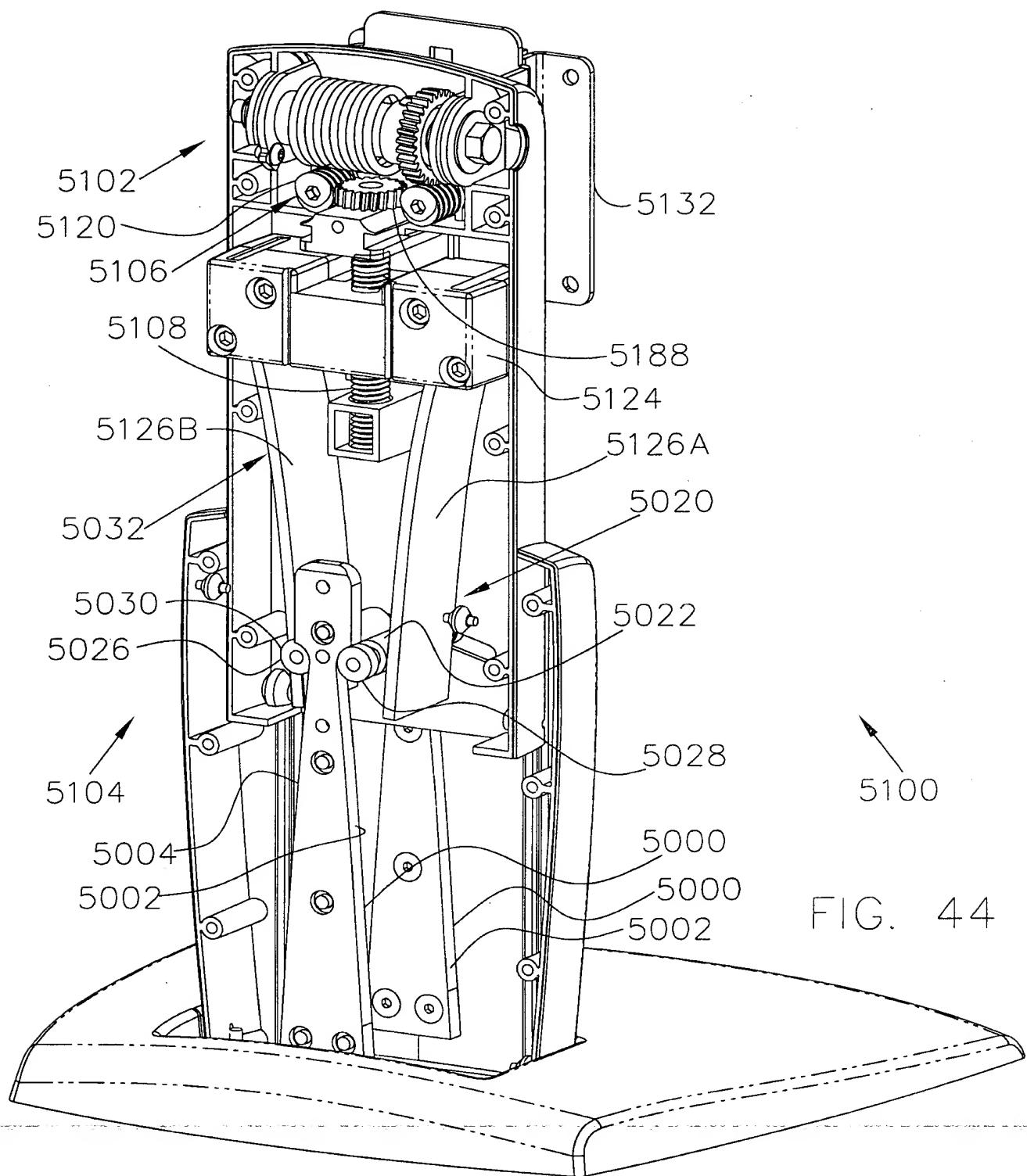


FIG. 44



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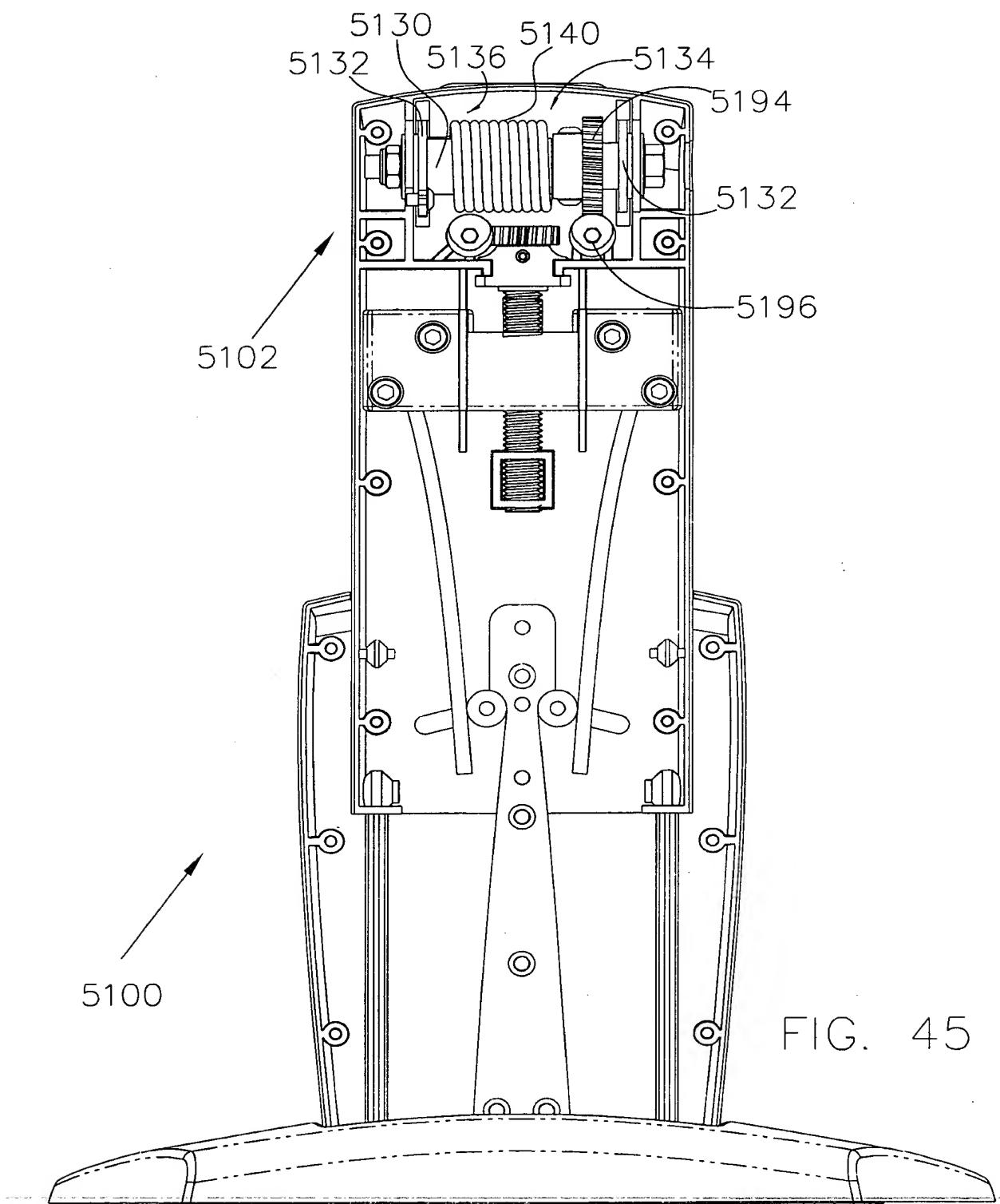


FIG. 45



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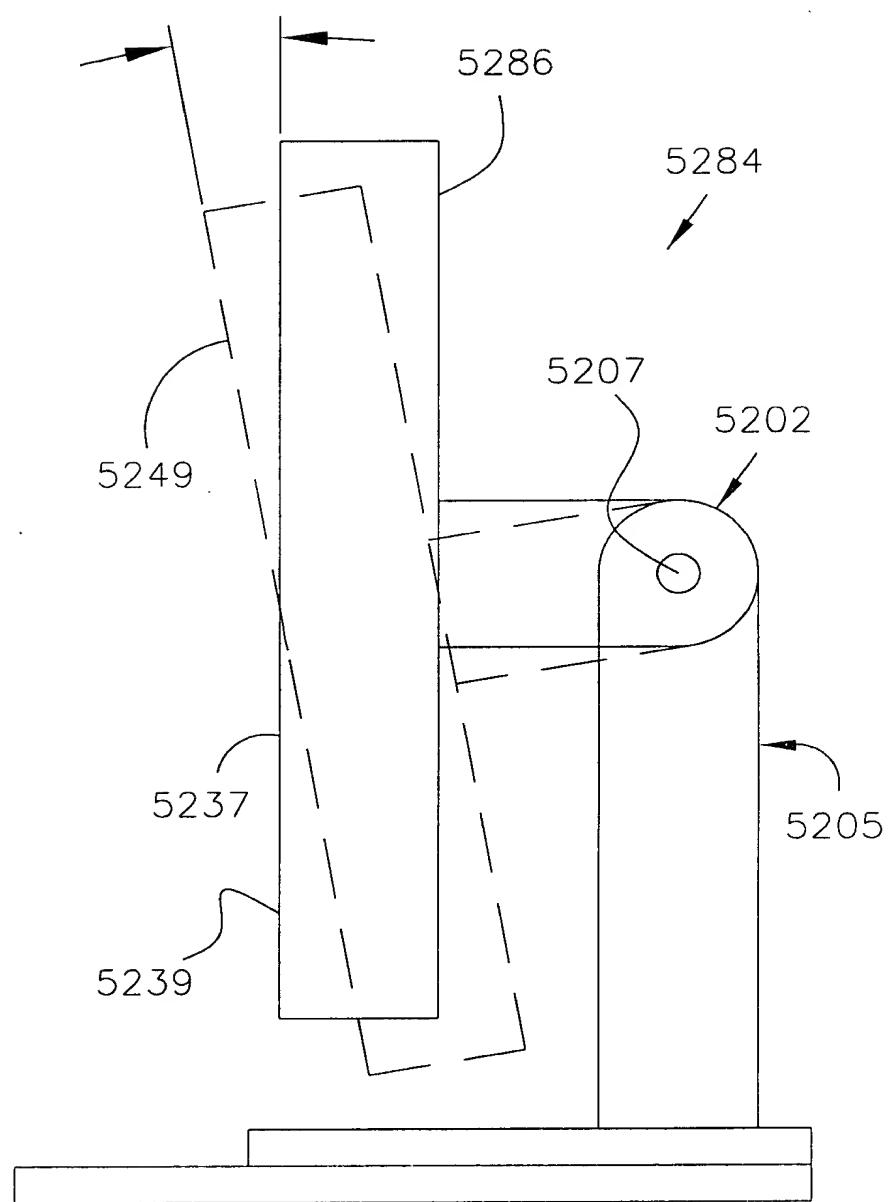


FIG. 46



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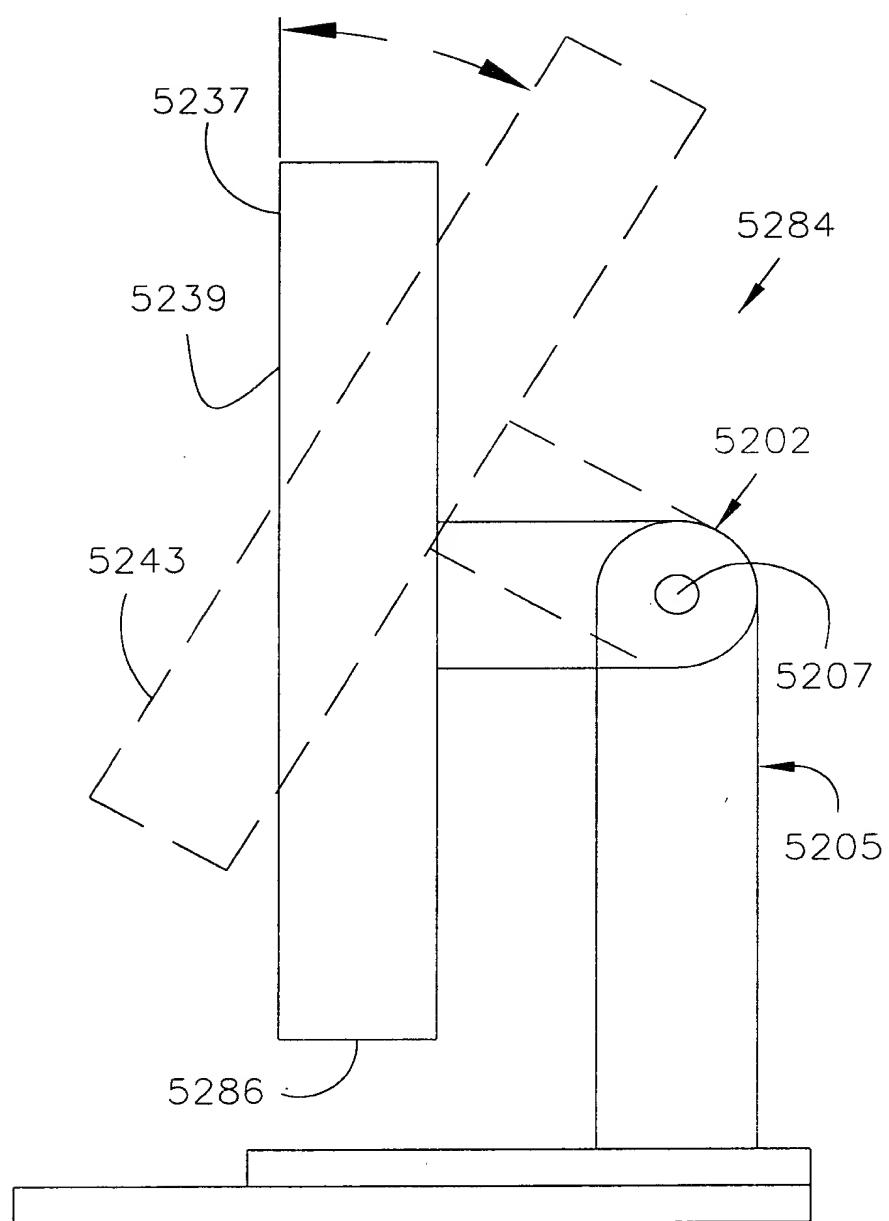
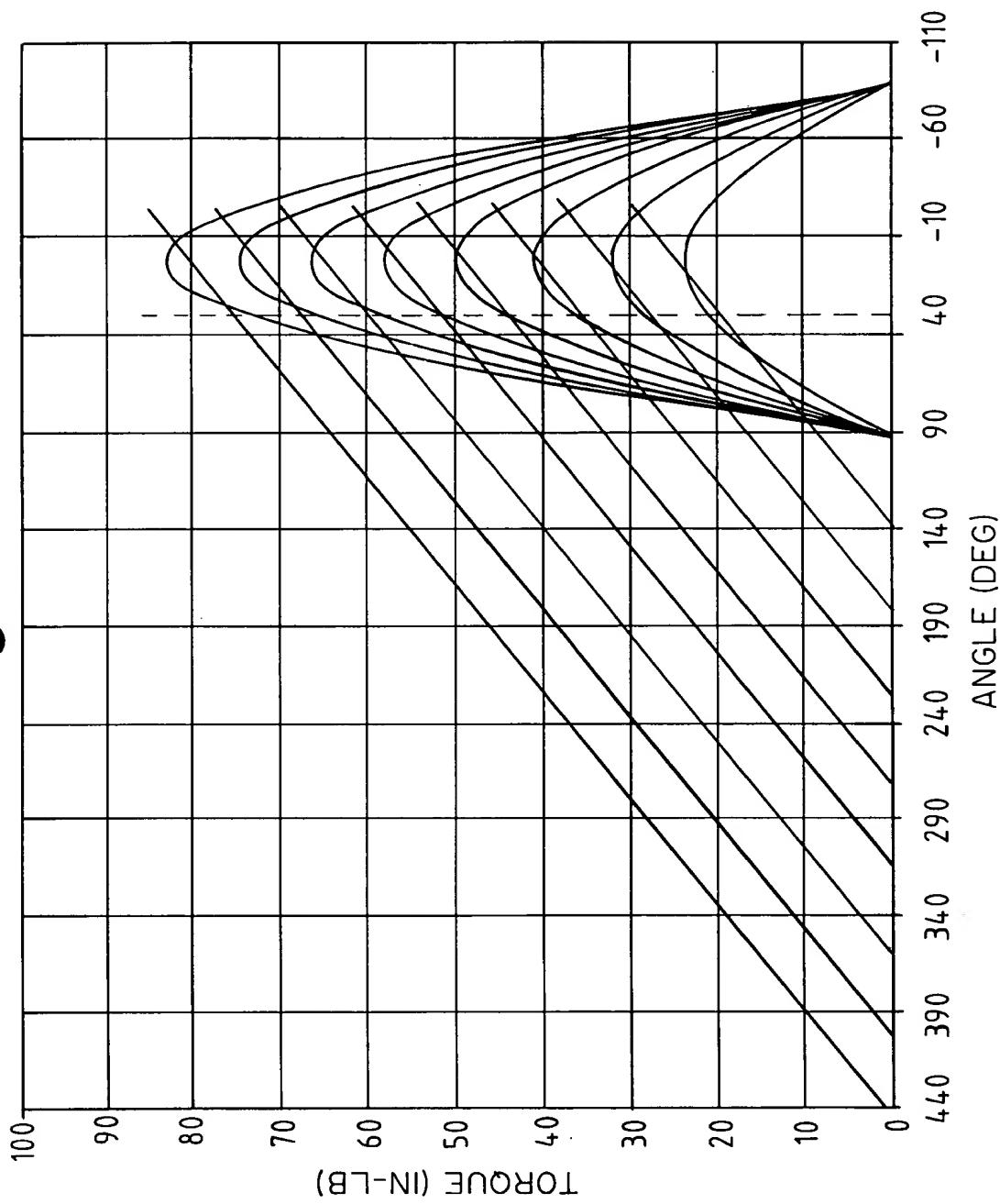


FIG. 47

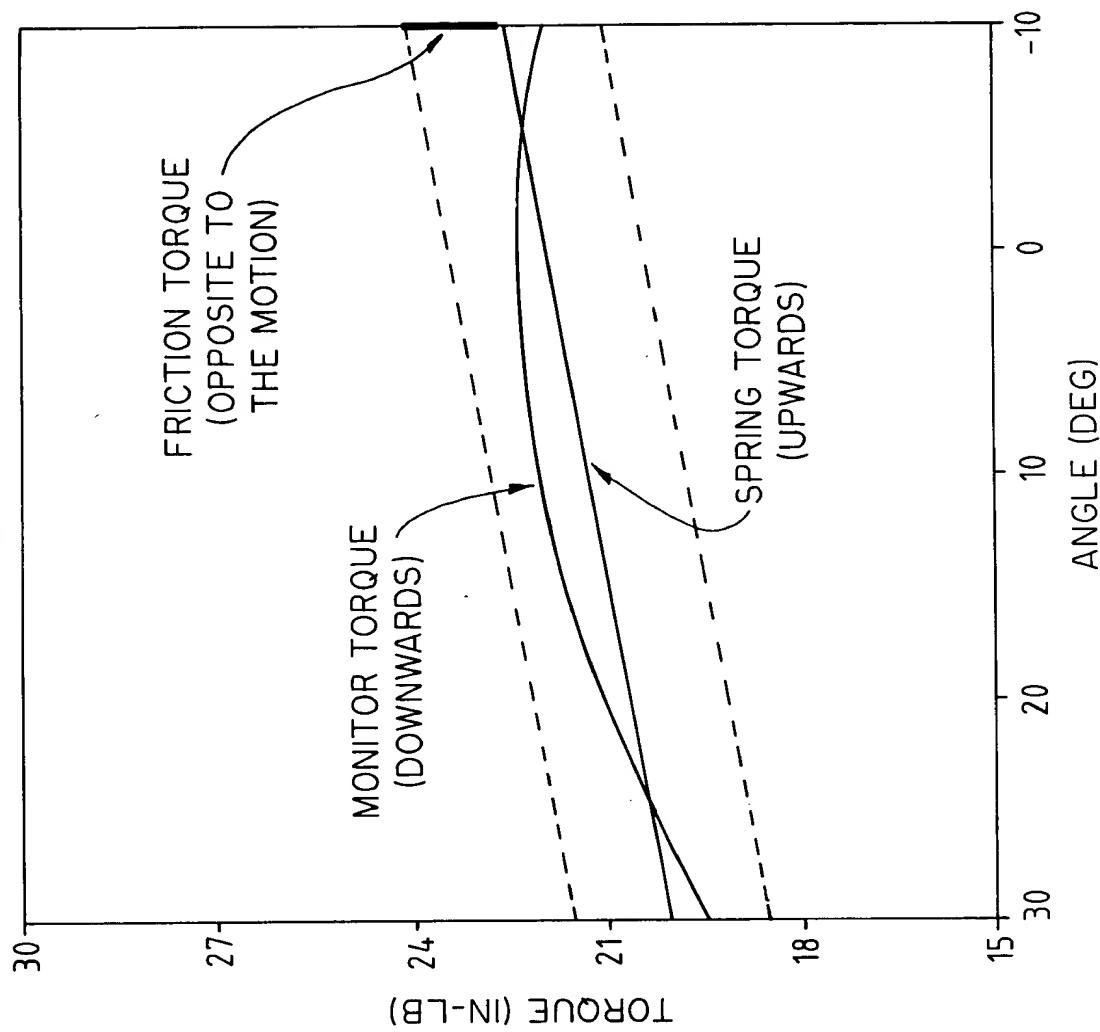


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**Fig. 48**



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**Fig. 49**



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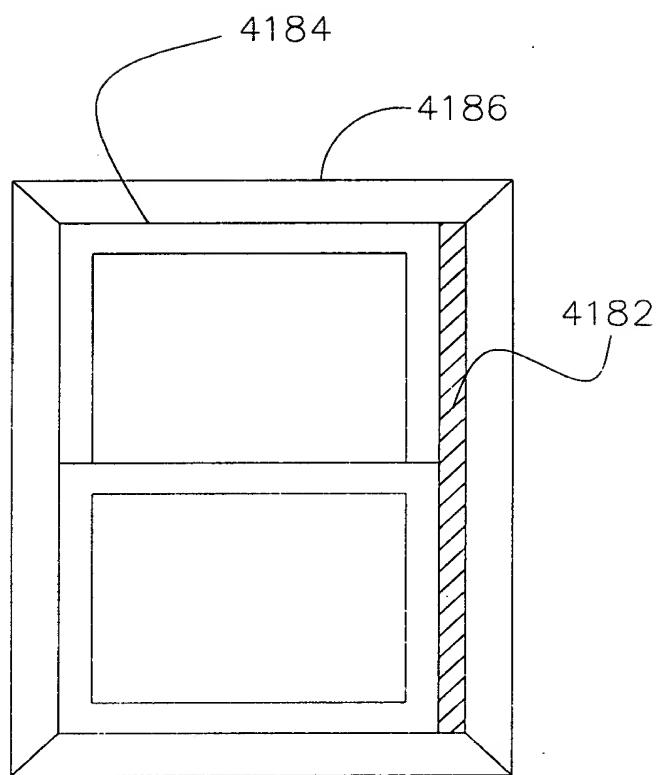


FIG. 50A



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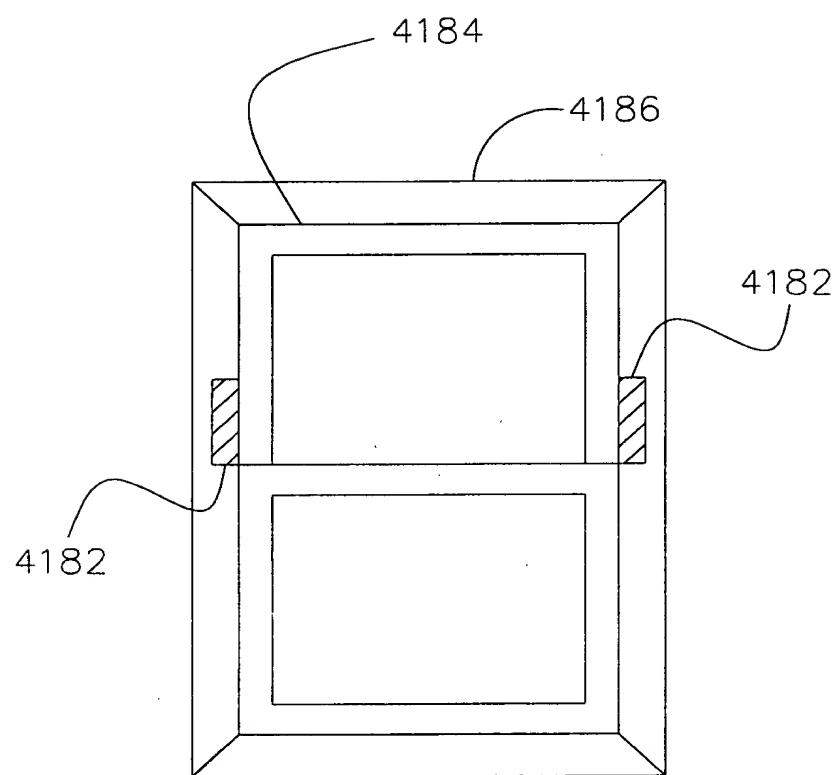


FIG. 50B



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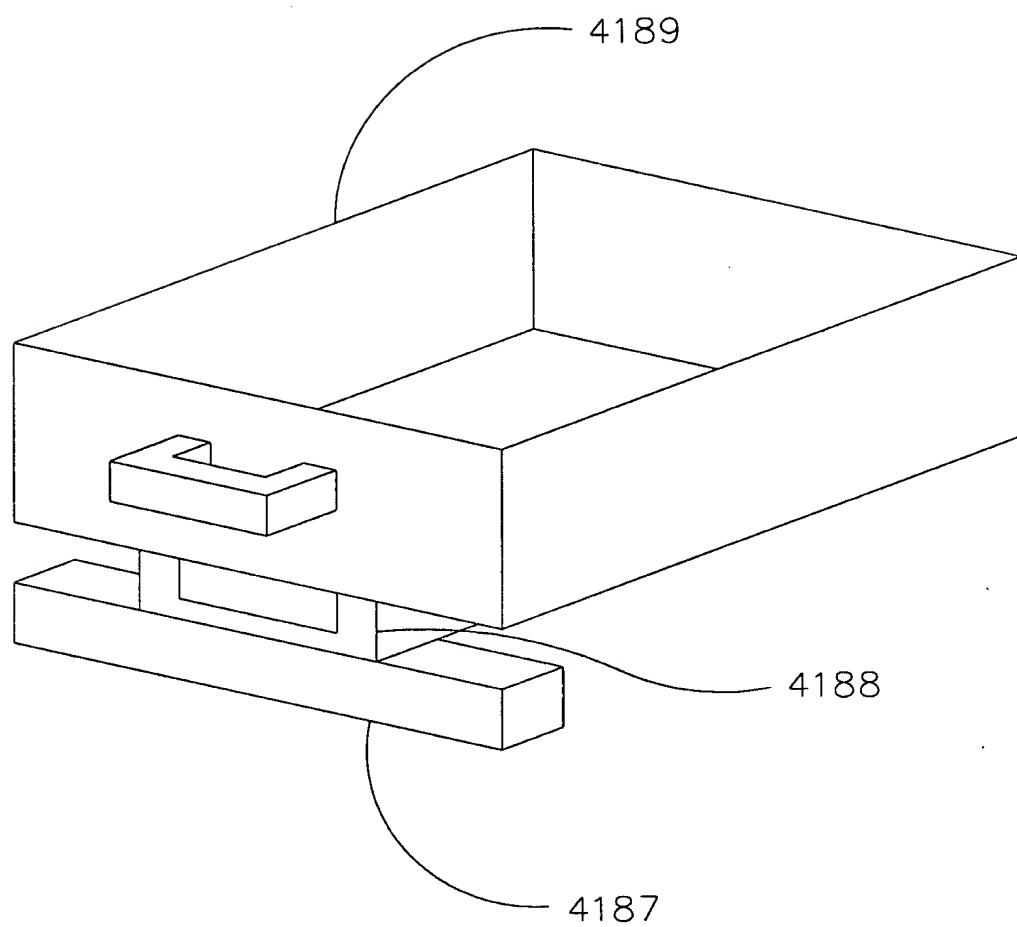


FIG. 51A



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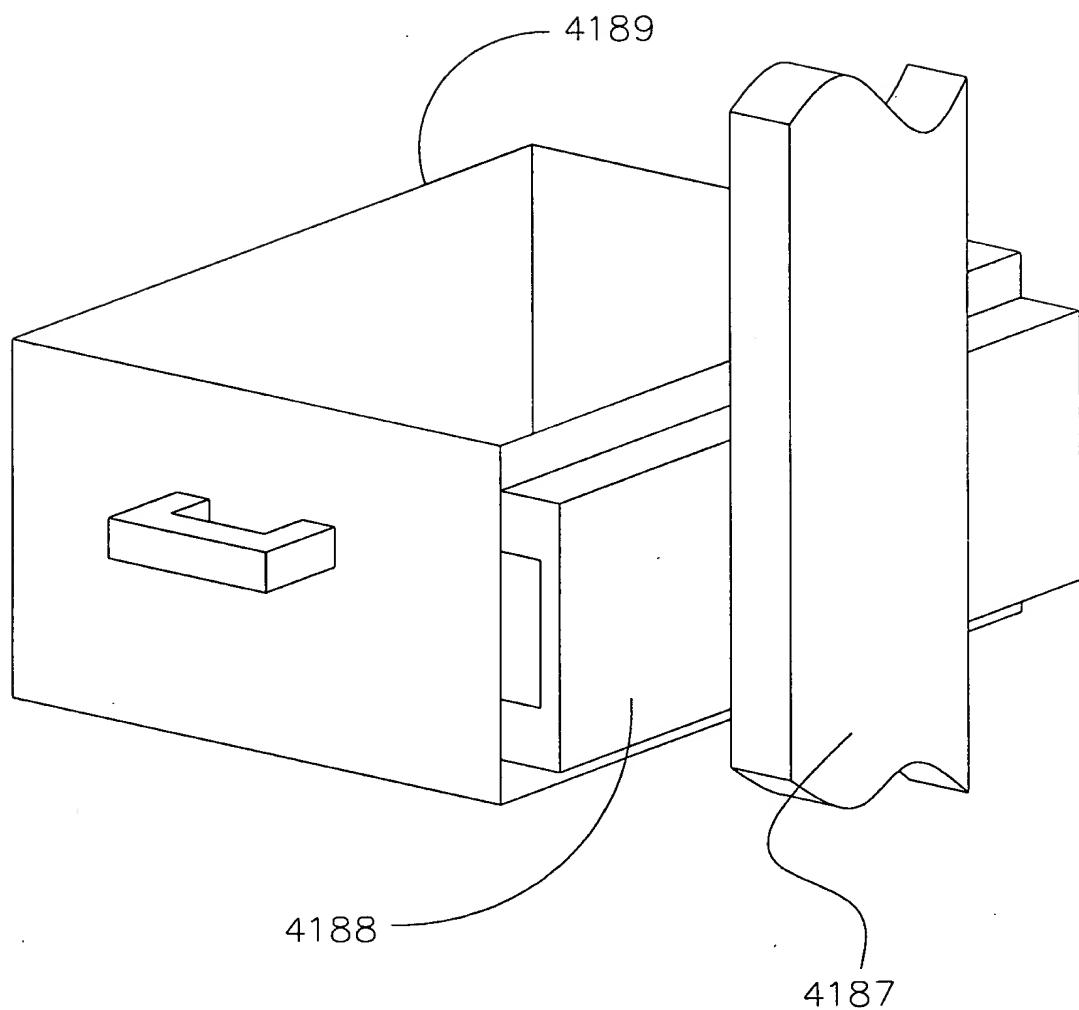


FIG. 51B



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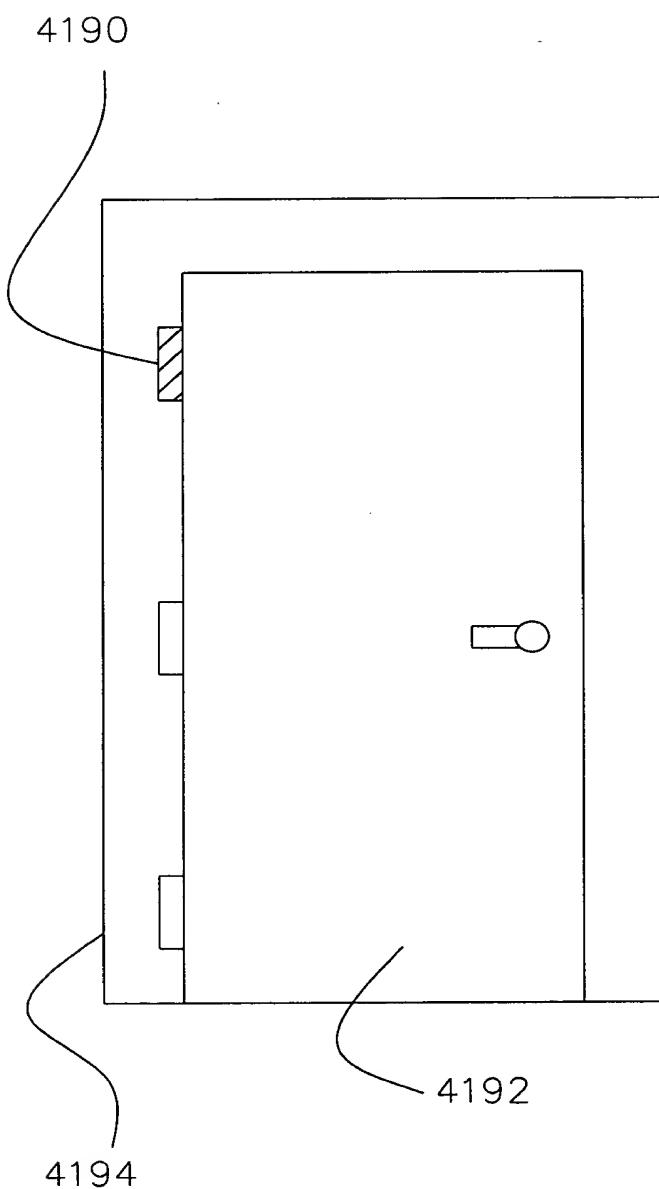


FIG. 52A



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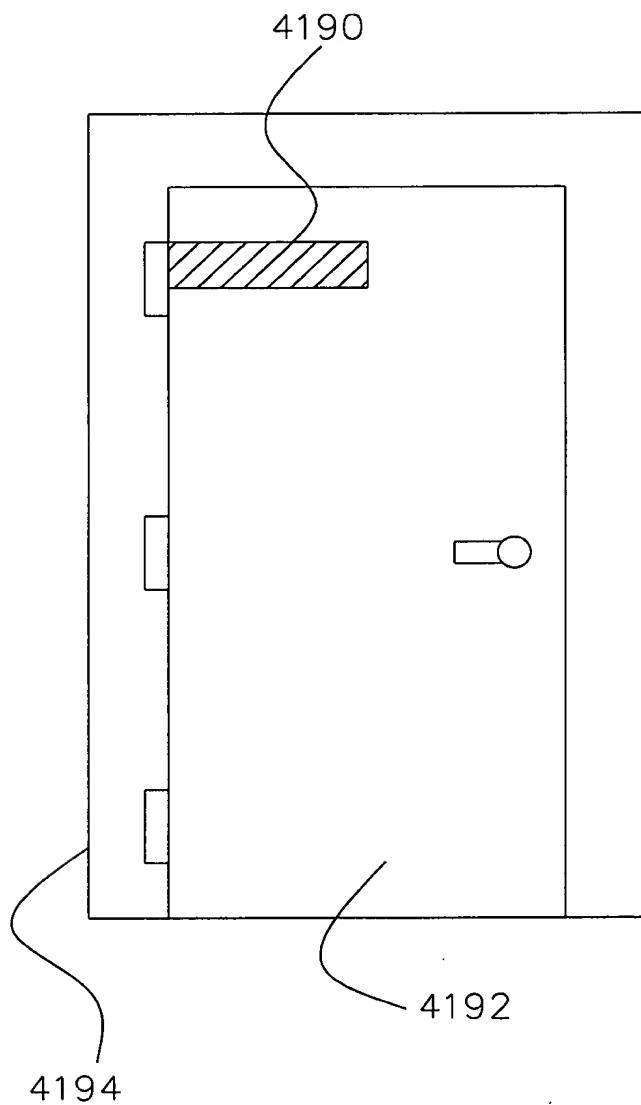


FIG. 52B



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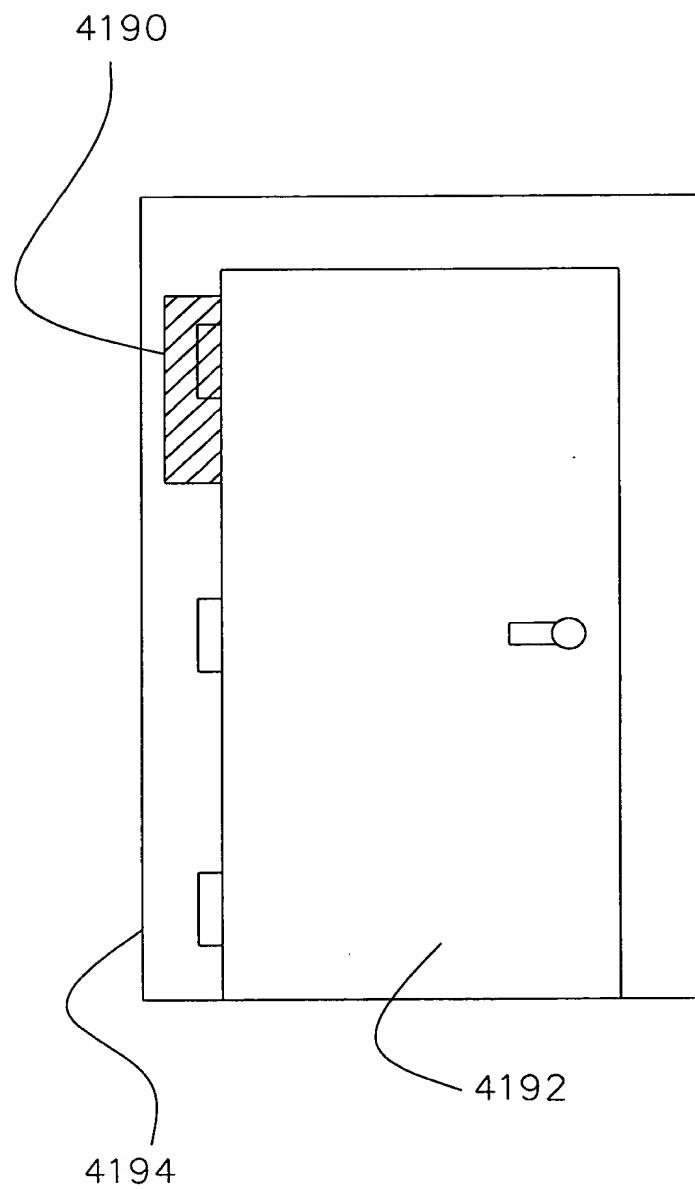


FIG. 52C



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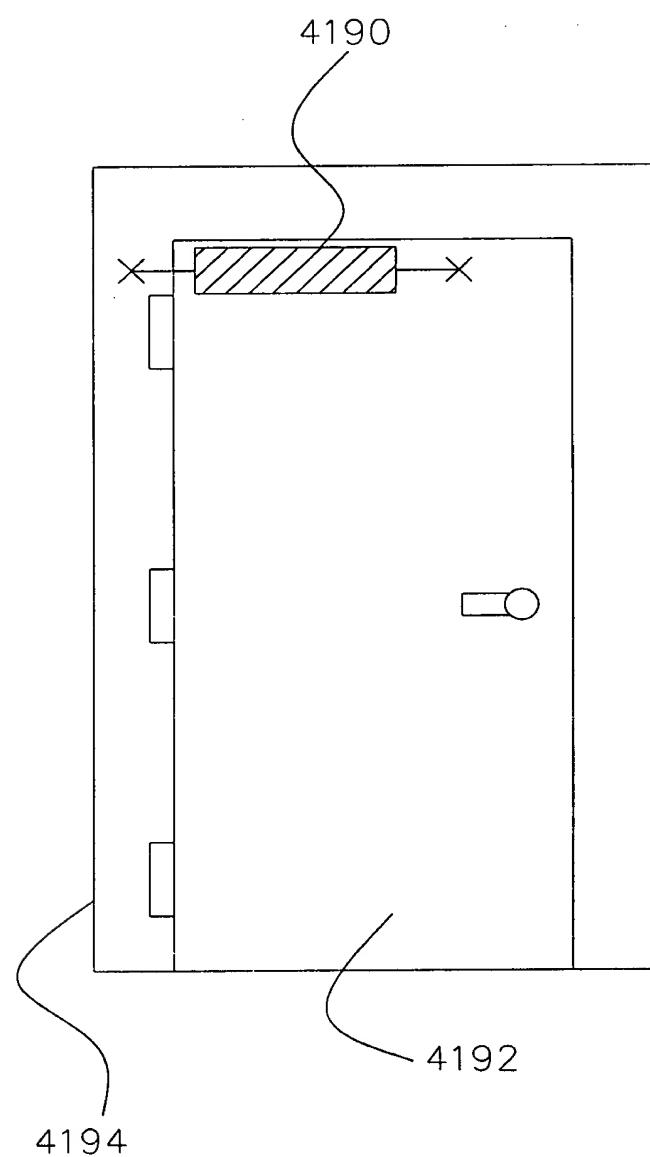


FIG. 52D



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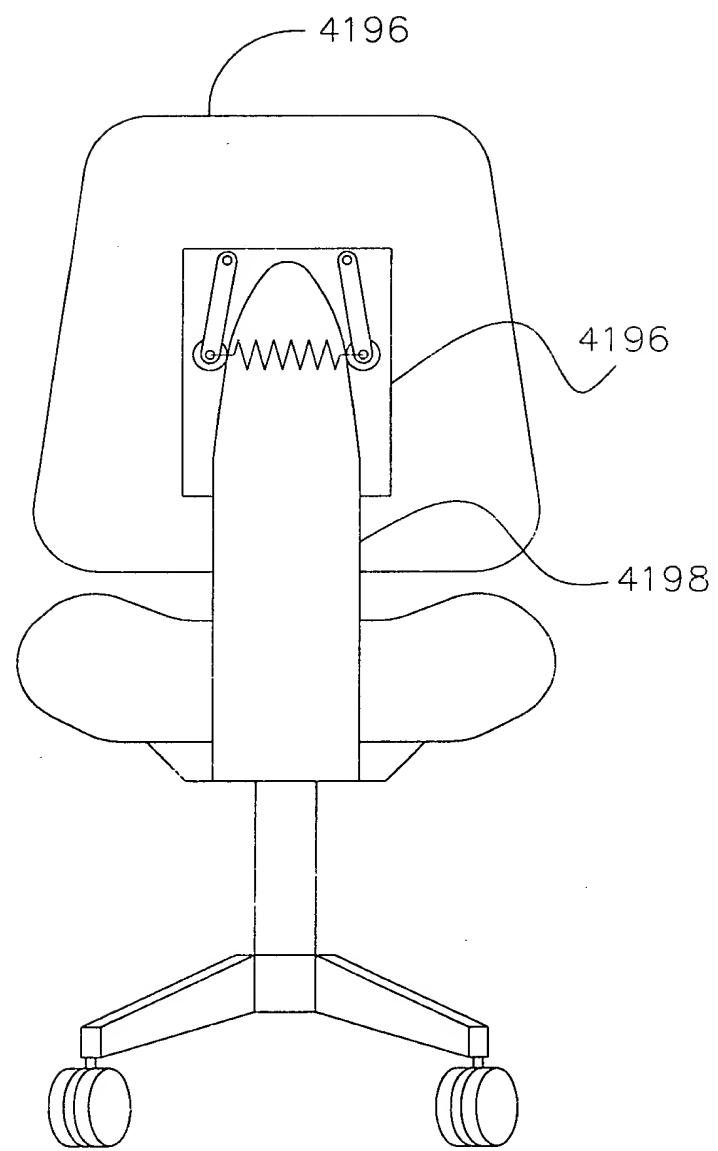


FIG. 53



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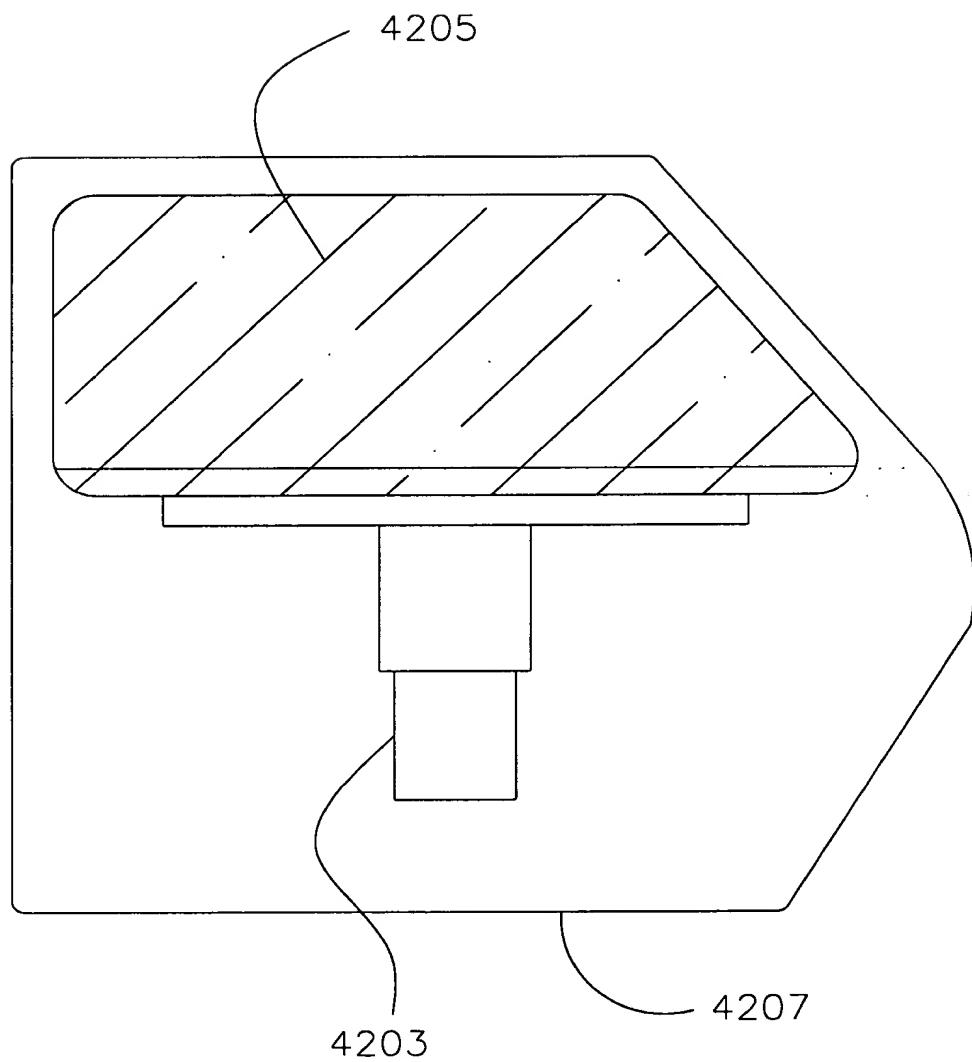


FIG. 54



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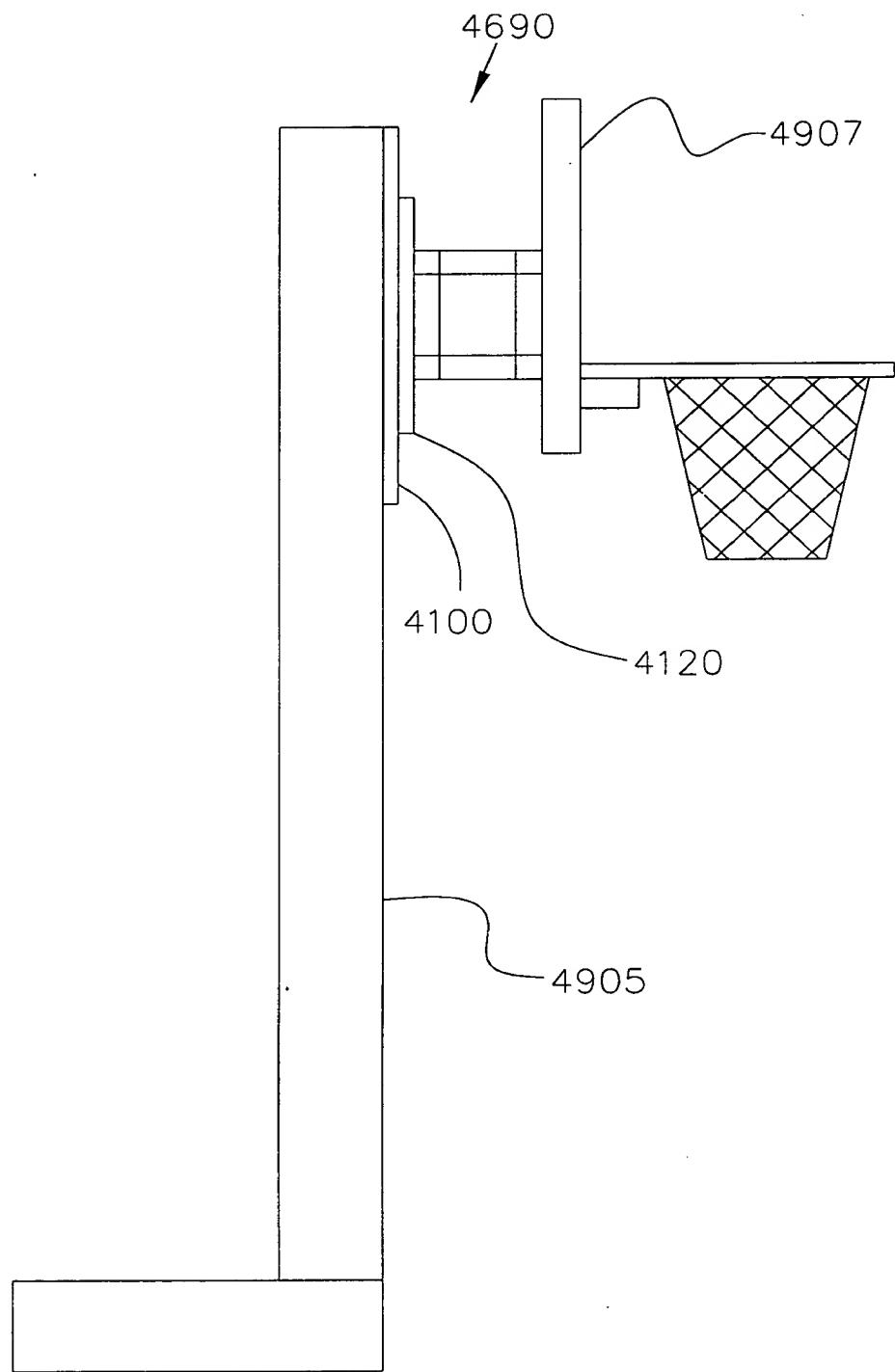


FIG. 55



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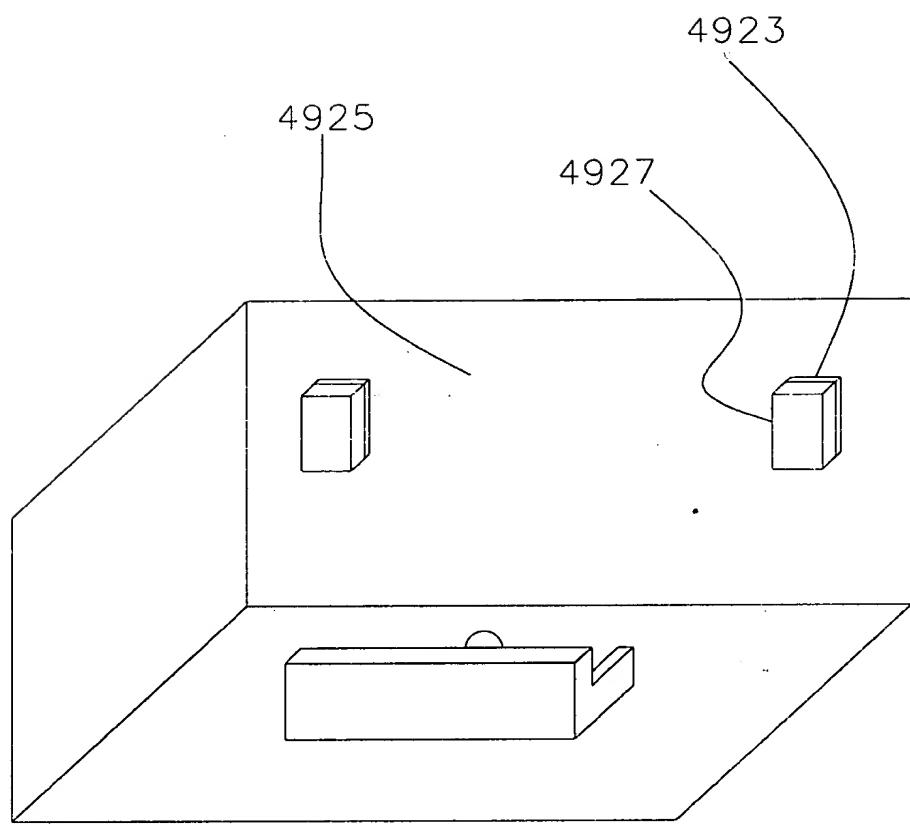


FIG. 56



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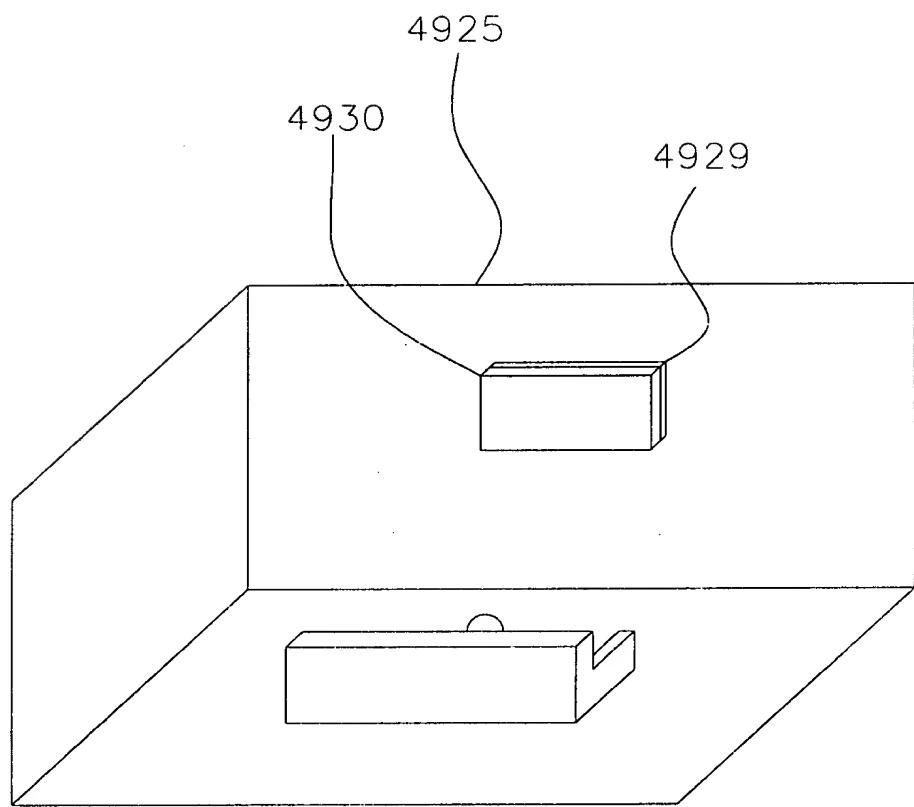


FIG. 57



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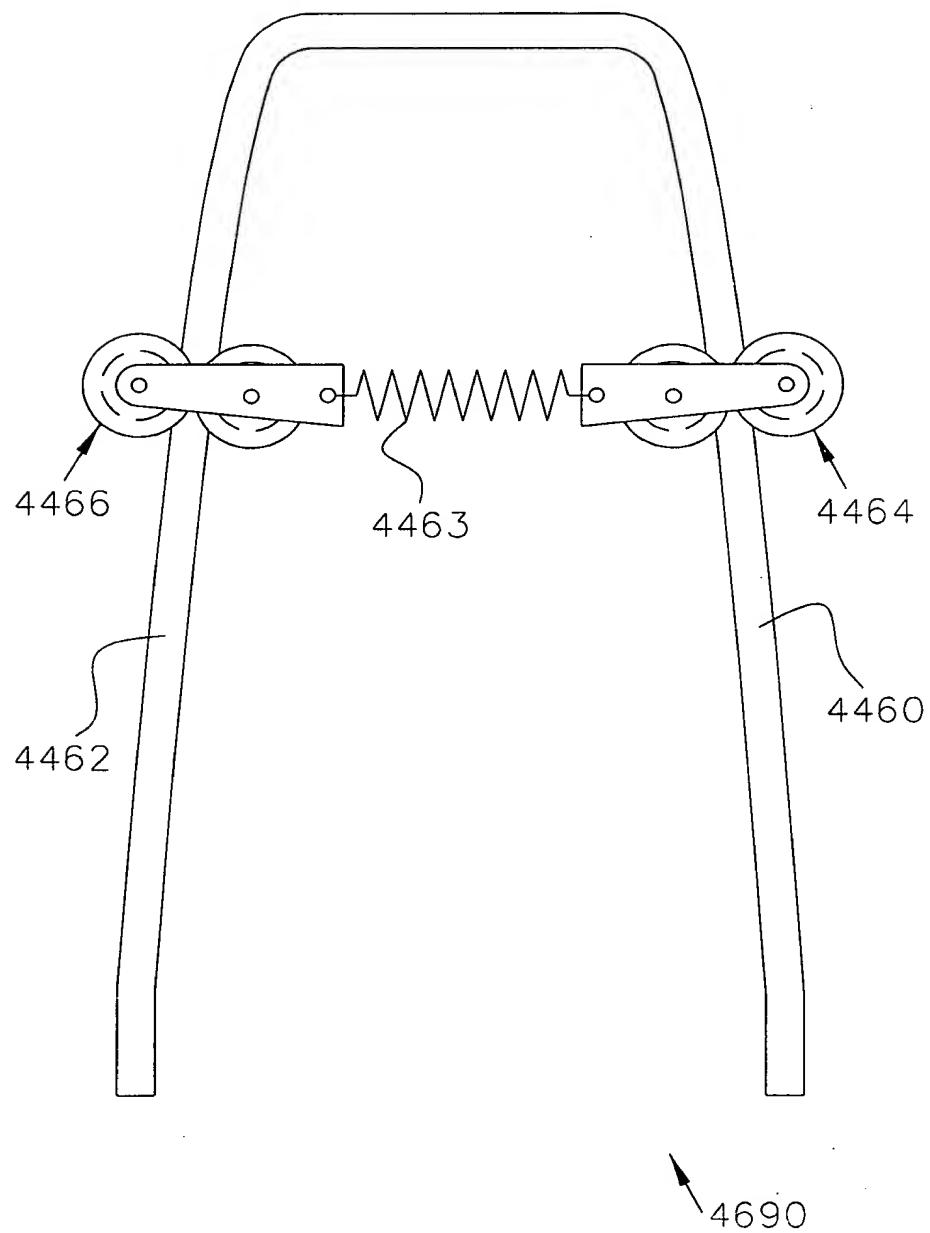


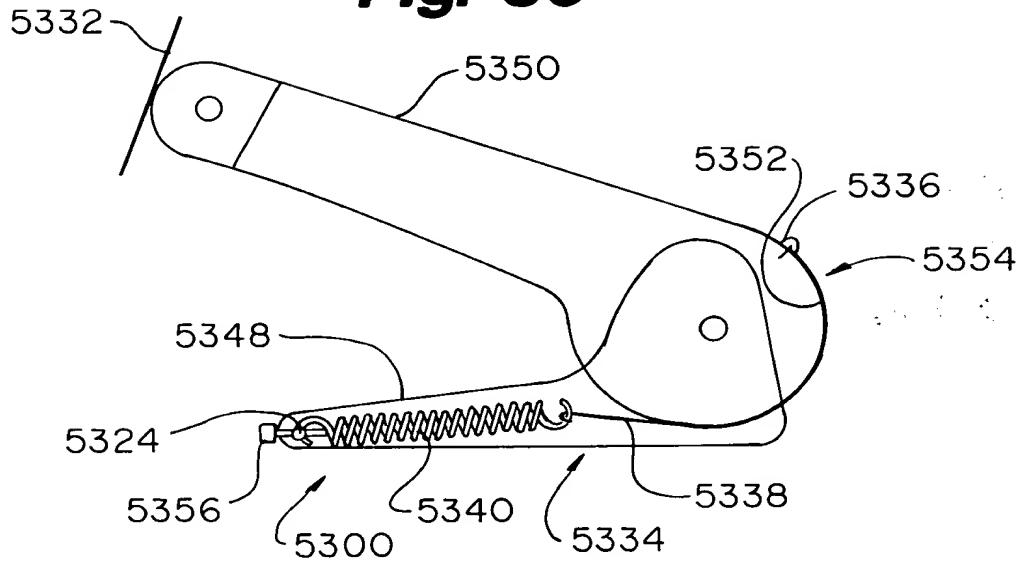
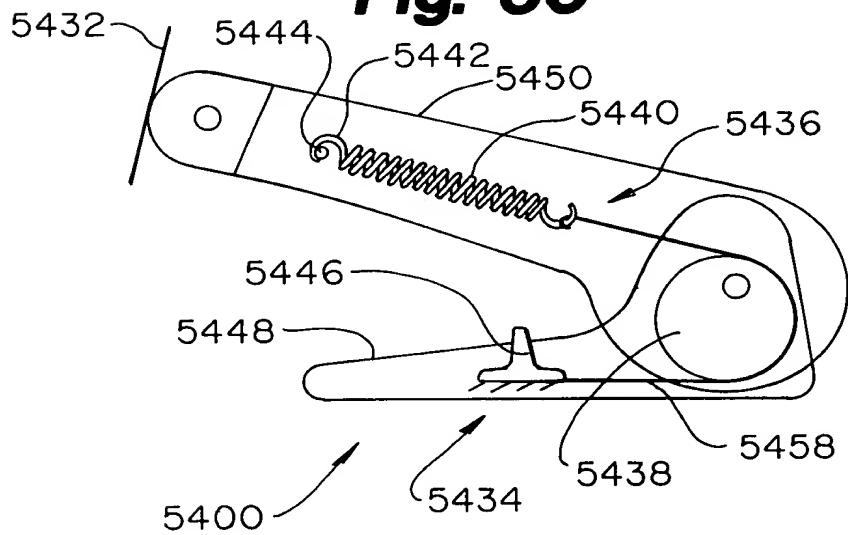
FIG. 58



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**Fig. 59****Fig. 60**



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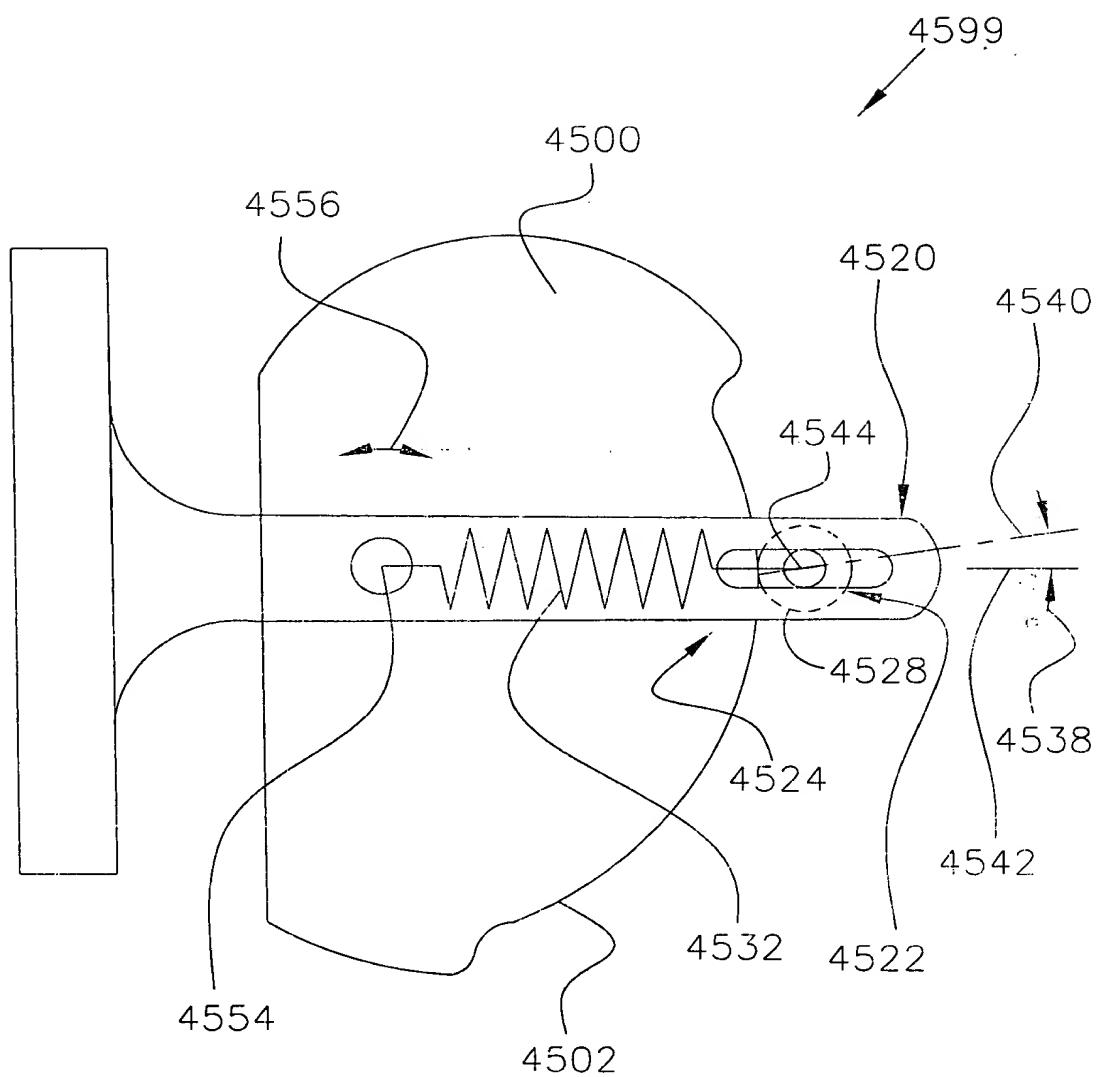


FIG. 61



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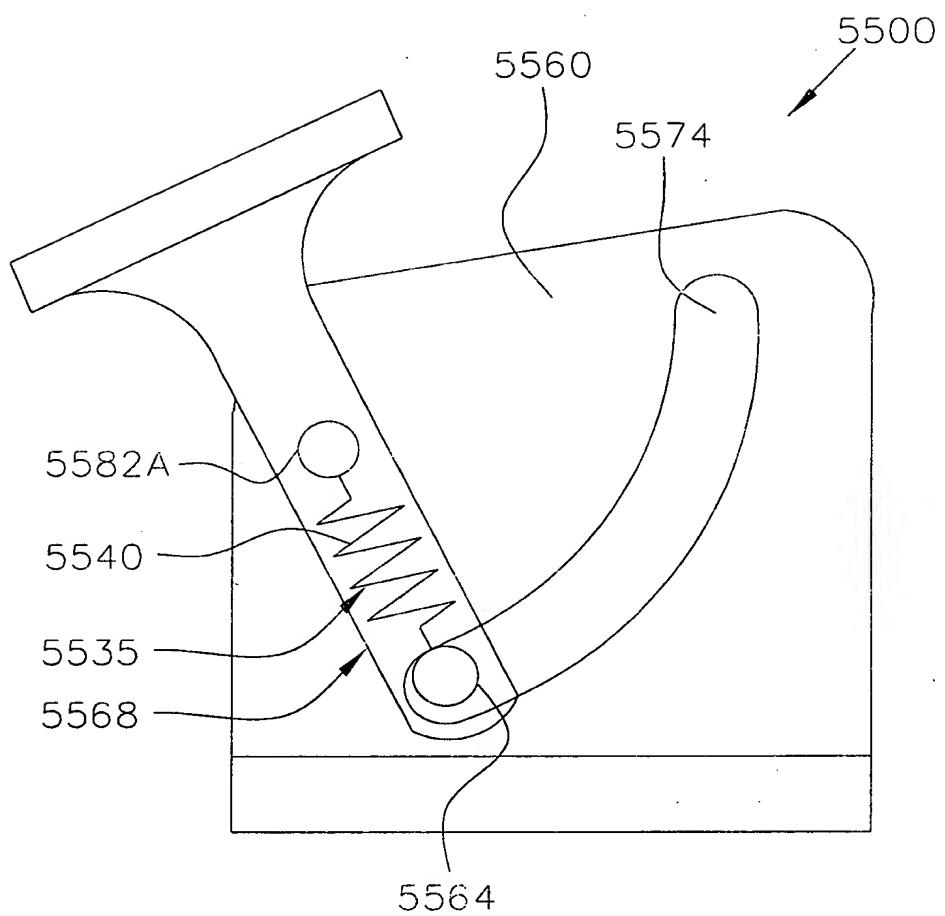


FIG. 62



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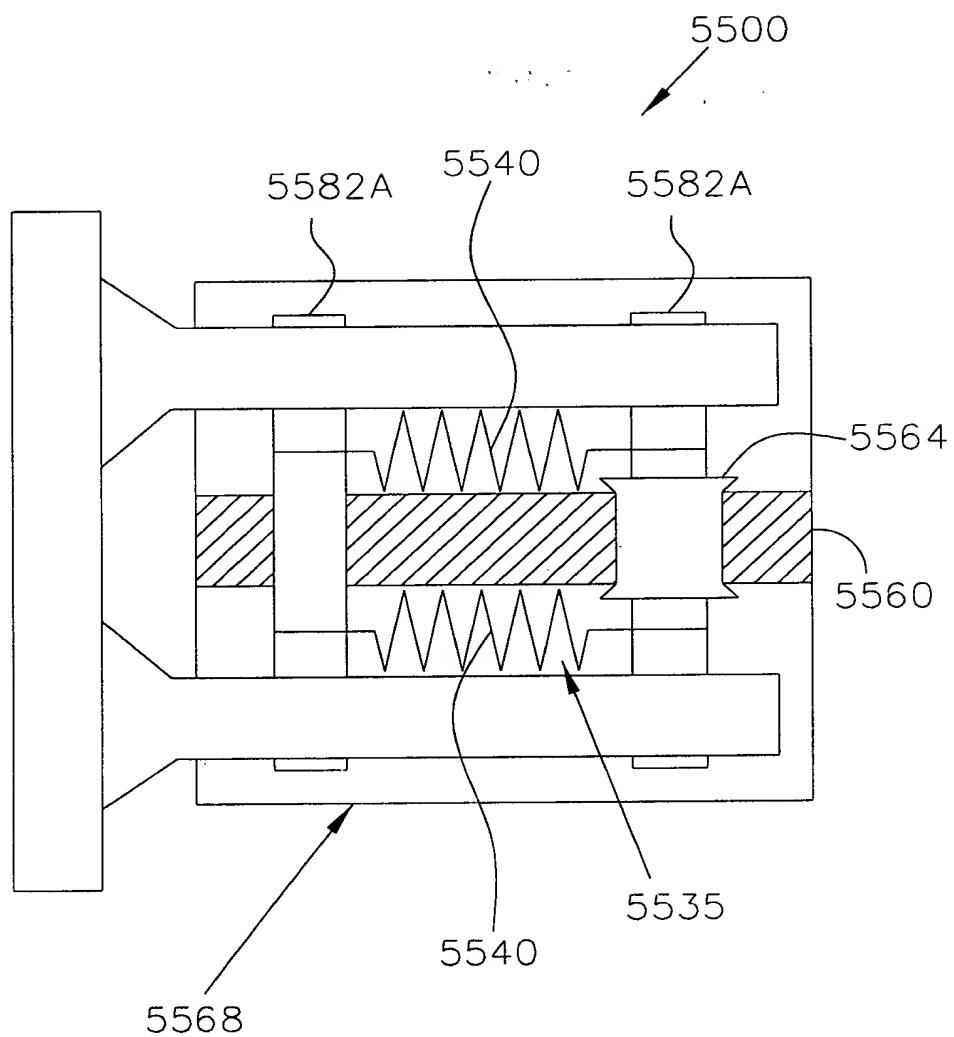


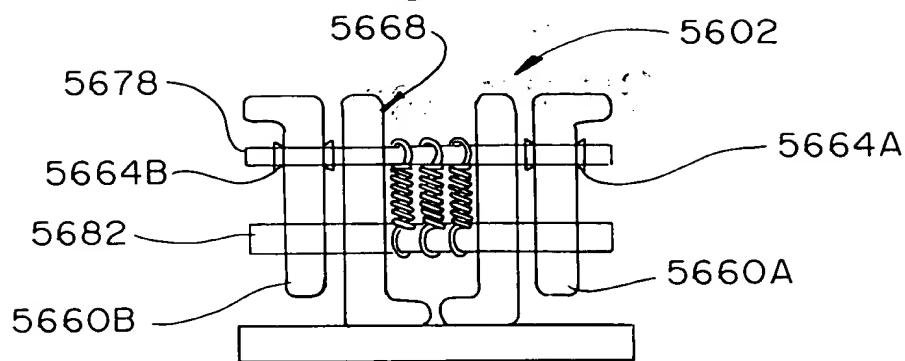
FIG. 63



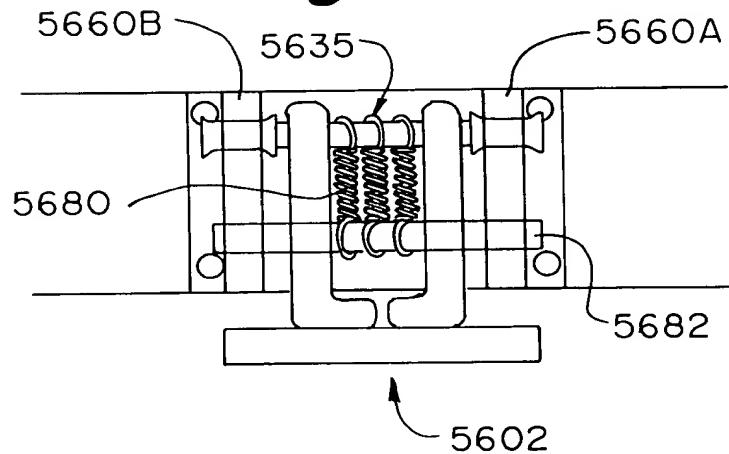
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**Fig. 64**



**Fig. 65**





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